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Subpart 188.35—American Bureau of Shipping's Standards

188.35–1 Standards to be used.
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AUTHORITY: The provisions of this Part 188 issued under R.S. 4405, as amended, 4462, as amended, sec. 5, 79 Stat. 424; 46 U.S.C. 375, 416, 445. Interpret or apply R.S. 4400, as amended, 4401, as amended, 4403, as amended, 4417, as amended, 4418, as amended, 4472, as amended, 4488, as amended, 4491, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended, sec. 17, 54 Stat. 166, as amended; 46 U.S.C. 362, 364, 372, 391, 392, 170, 481, 489, 395, 363, 367, 526p; E.O. 11239, July 31, 1965, 30 F.R. 9671, 3 CFR 1965 Supp. Treasury Dept. Orders 120, July 31, 1950, 15 F.R. 6521; CGFR 56–38, July 24, 1956, 21 F.R. 5659; 167–66, Sept. 8, 1965, 30 F.R. 11735.

Subpart 188.01—Authority and Purpose

§ 188.01–1 Purpose of regulations.

(a) The purpose of the regulations in this subchapter is to set forth uniform minimum requirements for oceanographic vessels found by the Officer in Charge, Marine Inspection, or the Commandant, U.S. Coast Guard, to be "oceanographic research vessels" as defined in section 441 of 46 U.S. Code (Public Law 89–99), and of a type as listed in column 7 of Table 188.05–1(a). These requirements are prescribed in accordance with the intent of Title 52 of the Revised Statutes and acts amendatory thereof or supplemental thereto which govern inspection and certification of vessels, and to provide for oceanographic vessels exemptions from specific requirements when found they are "* * * not necessary in the performance of the mission of the vessel, * * *"; as well as to specify the terms and conditions applicable to such vessels, as authorized by section 445 of 46 U.S. Code (Public Law 89–99). The regulations are necessary to carry out the provisions of applicable laws governing inspection and certification of oceanographic vessels and such regulations have the force of law.

§ 188.01–3 Scope of regulations.

(a) The regulations in this subchapter contain requirements for materials, design, construction, equipment, lifesaving appliances and procedures, fire protection, and fire prevention procedures, inspection and certification, and special operational requirements for oceanographic vessels, including the handling, use, and control of explosives and other dangerous articles or substances.

(b) The regulations in this subchapter are deemed to be necessary when "* * * a vessel * * * is being employed exclusively in instruction in oceanography or limnology, or both, or exclusively in oceanographic research * * *." If or when a vessel is not so exclusively employed and engages in any trade or commerce then the provisions of section 441 through 445 of 46, U.S. Code (Public Law 89–99), are not applicable and such a vessel shall be subject to the applicable provisions of laws and other regulations in this chapter governing such activities.

(c) The regulations in this subchapter do not govern the minimum manning of oceanographic vessels, nor the shipment and discharge of seamen.

(1) For manning of oceanographic vessels, see § 157.15–1 and other applicable regulations in Part 157 of Subchapter P (Manning) of this chapter.

(2) For shipment and discharge of seamen, see Parts 14 through 16 of Subchapter B (Merchant Marine Officers and Seamen) of this chapter for applicable requirements.

§ 188.01–5 Assignment of functions.

(a) The Secretary of the Treasury by Treasury Department Order 120, dated July 31, 1950 (15 F.R. 6521), and others for specific laws or amendments enacted since then, delegated to the Commandant, U.S. Coast Guard, the administration of functions in the vessel inspection laws.

(b) The Acting Assistant Secretary of the Treasury, pursuant to the authority delegated by the Secretary of the Treasury in Treasury Department Order 190 (Rev. 2), by Treasury Department Order 167–66, dated September 8, 1965 (30 F.R. 11735), transferred to the Commandant, U.S. Coast Guard, the functions of the Secretary of the Treasury contained in the Act of July 30, 1965 (Public Law 89–99, 79 Stat. 424, 46 U.S.C. 441–445), concerning the exemption of oceanographic research vessels from the application of certain vessel inspection laws.

§ 188.01–10 Authority for regulations.

(a) *General.* The authority to prescribe regulations generally is set forth in 46 U.S. Code, sections 375 and 416, as well as in certain other provisions in 46 U.S. Code, sections 170, 361, 362, 363, 364, 367, 372, 391, 392, 395, 399, 400, 407, 411, 435, 481, and 489. In 46 U.S. Code, section 445, is the authority for exemptions for oceanographic vessels upon such terms and conditions as may be deemed necessary. Under the provisions of 46 U.S. Code, section 372, the Commandant, U.S. Coast Guard, superintends the administration of the vessel inspection laws and is required to produce a correct and uniform administration of the inspection laws, rules and regulations.

(b) *Inspection and certification.* The regulations regarding inspection and certification of oceanographic vessels interpret or apply 46 U.S. Code, sections 363, 367, 391, 392, 395, 399, 411, 435, and 481.

(c) *Construction and arrangement.* The regulations regarding construction and arrangement of oceanographic vessels interpret or apply 46 U.S. Code, sections 363, 367, 391, 392, 395, and 481.

(d) *Subdivision and stability.* The regulations regarding subdivision and stability of oceanographic vessels interpret or apply 46 U.S. Code, sections 85a, 88a, 363, 367, 392, 395, 435, and 481.

(e) *Lifesaving equipment.* The regulations regarding lifesaving equipment of oceanographic vessels interpret or apply 46 U.S. Code, sections 363, 367, 391, 392, 395, 435, 481, and 526p.

(f) *Fire protection equipment.* The regulations regarding fire protection equipment of oceanographic vessels interpret or apply 46 U.S. Code, sections 363, 367, 391, 392, 395, 435, 481, and 526p.

(g) *Handling, use and control of explosives and other dangerous articles.* The regulations regarding the handling, use, and control of explosives and other dangerous articles for oceanographic vessels interpret or apply 46 U.S. Code, sections 170, 363, 367, 391, 392, 395, 435, and 481.

(h) *Vessel control and miscellaneous systems and equipment.* The regulations regarding vessel control and miscellaneous systems and equipment of oceanographic vessels interpret or apply 46 U.S. Code, sections 363, 367, 391, 392, 395, 435, and 481.

(i) *Operations.* The regulations regarding operations of oceanographic vessels interpret or apply 46 U.S. Code, sections 170, 363, 367, 391, 392, 395, 435, and 481.

Subpart 188.05—Application

§ 188.05–1 Vessels subject to requirements of this subchapter.

(a) This subchapter shall be applicable to all U.S.-flag vessels indicated in

Column 7 of Table 188.05–1(a) to the extent prescribed by applicable laws and the regulations in this subchapter, except as follows:

(1) Any foreign vessel.

(2) Any vessel operating exclusively on inland waters which are not navigable waters of the United States.

(3) Any vessel while laid up and dismantled and out of commission.

(4) With the exception of vessels of the U.S. Maritime Administration, any vessel with title vested in the United States and which is used for public purposes.

TABLE 188.05–1(a)

Method of propulsion	Size or other limitations [1]	Classes of vessels (including motorboats) examined or inspected under various Coast Guard regulations [1]				
		Vessels inspected and certificated under Subchapter D—Tank Vessels [2]	Vessels inspected and certificated under either Subchapter H—Passenger Vessels [2 3 4 5] or Subchapter T—Small Passenger Vessels [2 3 4]	Vessels inspected and certificated under Subchapter I—Cargo and Miscellaneous Vessels [2 5]	Vessels subject to provisions of Subchapter C—Uninspected Vessels [2 3 6 7]	Vessels subject to provisions of Subchapter U—Oceanographic Vessels [2 6 7 8]
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Steam	Vessels not over 65 feet in length.	All vessels carrying combustible or flammable liquid cargo in bulk.	All vessels carrying more than 6 passengers.[7]	All tugboats and towboats.	All vessels except those covered by columns 3, 4, 5, and 7.	All vessels engaged in oceanographic research.
	Vessels over 65 feet in length.	All vessels carrying combustible or flammable liquid cargo in bulk.[5]	1. All vessels carrying more than 12 passengers on an international voyage, except yachts. 2. All vessels of not over 15 gross tons which carry more than 6 passengers.[7] 3. All other vessels carrying passengers,[7] except: a. Yachts. b. Documented cargo or tank vessels issued a permit to carry not more than 16 persons in addition to the crew. c. Towing and fishing vessels, in other than ocean and coastwise service, may carry persons on the legitimate business of the vessel, in addition to crew, but not to exceed one for each net ton of the vessel.	All vessels except those covered by columns 3 and 4.	None	All vessels engaged in oceanographic research.
Motor	Vessels not over 15 gross tons.	All vessels carrying combustible or flammable liquid cargo in bulk.	All vessels carrying more than 6 passengers.[7]	Those vessels carrying dangerous cargoes when required by 46 CFR Part 98 or 146.	All vessels except those covered by columns 3, 4, 5, and 7.	None.
	Vessels over 15 gross tons except seagoing motor vessels of 300 gross tons and over.	All vessels carrying combustible or flammable liquid cargo in bulk.[5]	1. All vessels carrying more than 12 passengers on an international voyage, except yachts. 2. All vessels not over 65 feet in length which carry more than 6 passengers.[7] 3. All other vessels of over 65 feet in length carrying passengers for hire except documented cargo or tank vessels issued a permit to carry not more than 16 persons in addition to the crew.	All vessels carrying freight for hire except those covered by columns 3 and 4.	All vessels except those covered by columns 3, 4, 5, and 7.	None.
	Seagoing motor vessels of 300 gross tons and over.	All vessels carrying combustible or flammable liquid cargo in bulk.[5]	1. All vessels carrying more than 12 passengers on an international voyage, except yachts. 2. All other vessels carrying passengers,[7] except: a. Yachts. b. Documented cargo or tank vessels issued a permit to carry not more than 16 persons in addition to the crew.	All vessels except those covered by columns 3 and 4, and those engaged in the fishing, oystering, clamming, crabbing, or any other branch of the fishery, kelp, or sponge industry.	All vessels except those covered by columns 3, 4, 5, and 7.	All vessels engaged in oceanographic research.
Sail	Vessels not over 700 gross tons.	All vessels carrying combustible or flammable liquid cargo in bulk.	All vessels carrying more than 6 passengers.[7]	Those vessels carrying dangerous cargoes when required by 46 CFR Part 98 or 146.	None	None.
	Vessels over 700 gross tons.	All vessels carrying combustible or flammable liquid cargo in bulk.	All vessels carrying passengers for hire.	Those vessels carrying dangerous cargoes when required by 46 CFR Part 98 or 146.	None	None.

See footnotes at end of table.

TABLE 188.05-1(a)—Continued

Method of propulsion	Size or other limitations [1]	Classes of vessels (including motorboats) examined or inspected under various Coast Guard regulations [1]				
		Vessels inspected and certificated under Subchapter D—Tank Vessels [3]	Vessels inspected and certificated under either Subchapter H—Passenger Vessels [2 4 6] or Subchapter T—Small Passenger Vessels [2 4]	Vessels inspected and certificated under Subchapter I—Cargo and Miscellaneous Vessels [2 6]	Vessels subject to provisions of Subchapter C—Uninspected Vessels [2 6 7]	Vessels subject to provisions of Subchapter U—Oceanographic Vessels [2 6 7 8]
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Non-self-propelled.	Vessels less than 100 gross tons.	All vessels carrying combustible or liquid cargo in bulk.	All vessels carrying more than 6 passengers.[7]	Those vessels carrying dangerous cargoes when required by 46 CFR Part 98 or 146.	All barges carrying passengers except those covered by column 4.	None.
	Vessels 100 gross tons or over.	All vessels carrying combustible or flammable liquid cargo in bulk.	All vessels carrying passengers for hire.	All seagoing barges except those covered by columns 3 and 4; and those inland barges carrying dangerous cargoes when required by 46 CFR Part 98 or 146.	All barges carrying passengers except those covered by columns 4 and 7.	All seagoing barges engaged in oceanographic research.

[1] Where length is used in this table it means the length measured from end to end over the deck, excluding sheer. This expression means a straight line measurement of the overall length from the foremost part of the vessel to the aftermost part of the vessel, measured parallel to the centerline.

[2] Subchapters E (Load Lines), F (Marine Engineering), J (Electrical Engineering), and N (Dangerous Cargoes) of this chapter may also be applicable under certain conditions. The provisions of 46 U.S.C. 170 and Subchapter N (Dangerous Cargoes) of this chapter apply whenever explosives or dangerous articles or substances are on board vessels (including motorboats), except when specifically exempted by law.

[3] Public nautical schoolships, other than vessels of the Navy and Coast Guard, shall meet the requirements of Part 167 of Subchapter R (Nautical Schools) of this chapter. Civilian nautical schoolships, as defined by 46 U.S.C. 1331, shall meet the requirements of Subchapter H (Passenger Vessels) and Part 168 of Subchapter R (Nautical Schools) of this chapter.

[4] Subchapter H (Passenger Vessels) of this chapter covers only those vessels of 100 gross tons or more. Subchapter T (Small Passenger Vessels) of this chapter covers only those vessels of less than 100 gross tons.

[6] Vessels covered by Subchapter H (Passenger Vessels) or I (Cargo and Miscellaneous Vessels) of this chapter, where the principal purpose or use of the vessel is not for the carriage of liquid cargo, may be granted a permit to carry a limited amount of flammable or combustible liquid cargo in bulk. The portion of the vessel used for the carriage of the flammable or combustible liquid cargo shall meet the requirements of Subchapter D (Tank Vessels) in addition to the requirements of Subchapter H (Passenger Vessels) or I (Cargo and Miscellaneous Vessels) of this chapter.

[6] Any vessel on an international voyage is subject to the requirements of the International Convention for Safety of Life at Sea, 1960.

[7] The meaning of the term "passenger" is as defined in the Act of May 10, 1956 (Sec. 1, 70 Stat. 151; 46 U.S.C. 390). On oceanographic vessels scientific personnel on board shall not be deemed to be passengers nor seamen, but for calculations of lifesaving equipment, etc., shall be counted as persons.

[8] Under 46 U.S.C. 441 an "oceanographic research vessel" is a vessel "* * * being employed exclusively in instruction in oceanography or limnology, or both, or exclusively in oceanographic research, * * *." Under 46 U.S.C. 443, "an oceanographic research vessel shall not be deemed to be engaged in trade or commerce." If or when an oceanographic vessel engages in trade or commerce, such vessel cannot operate under its certificate of inspection as an oceanographic vessel, but shall be inspected and certificated for the service in which engaged, and the scientific personnel aboard then become persons employed in the business of the vessel.

[9] Boilers and machinery are subject to examination on vessels over 40 feet in length.

§ 188.05–2 Exemptions from inspection laws for oceanographic vessels and terms and conditions which apply in lieu thereof.

(a) The regulations in this subchapter govern vessels employed exclusively as "oceanographic research vessels," as defined in section 441 of 46, U.S. Code, with respect to inspection and certification by the U.S. Coast Guard. Any law in Title 52 of the Revised Statutes regarding inspection and certification which has requirements different from those specified in this subchapter shall be deemed to come within the provisions of section 445 of 46, U.S. Code, and the oceanographic vessel shall be exempt from its application because it is not necessary in the performance of the mission of the vessel so long as the vessel complies with the applicable requirements in this subchapter.

(b) The oceanographic vessel shall comply with the dangerous cargo act in section 170 of 46, U.S. Code, and the regulations in Subchapter N (Dangerous Cargoes) of this chapter whenever applicable, except to the extent as specifically provided otherwise in this subchapter.

§ 188.05–3 New vessels and existing vessels for the purpose of application of regulations in this subchapter.

(a) *New vessels.* In this application of the regulations in this subchapter, a new vessel is meant to be one, the construction of which is contracted for on or after March 1, 1967, or the major alteration of a vessel is contracted for on or after March 1, 1967, or the conversion of any vessel not previously inspected and certificated by the Coast Guard which is contracted for on or after March 1, 1967.

(b) *Existing vessels.* In the application of the regulations in this subchapter an existing vessel is meant to be one which is holding a valid certificate of inspection as an oceanographic vessel on March 1, 1967.

(c) *Other vessels.* When it is desired to have a vessel, which has been used in another trade or for recreational purposes, initially inspected and certificated as an oceanographic vessel on or after March 1, 1967, such vessel shall be subject to all the requirements governing a vessel contracted for on or after March 1, 1967. However, if such vessel has a current certificate of inspection as a passenger, tank, cargo, or miscellaneous vessel, the Commandant may authorize its inspection and certification under this subchapter as a vessel contracted for prior to March 1, 1967, subject to those requirements necessitated by change in service.

§ 188.05–5 Specific application noted in text.

(a) At the beginning of the various parts, subparts, and sections, a more specific application is generally given for the particular portion of the text involved. This application sets forth the types, sizes, or services or vessels to which the text pertains, and in many cases limits the application of the text to vessels contracted for before or after a specific date. As used in this subchapter, the term "vessels contracted for" includes not only the contracting for the construction of a vessel, but also the contracting for a material alteration to a vessel, the contracting for the conversion of a vessel to an oceanographic vessel, and the changing of area of operation of a vessel if such change increases or modifies the general requirements for the vessel or increases the hazards to which it might be subjected.

§ 188.05–7 Ocean or unlimited coastwise vessels on inland and Great Lakes routes.

(a) Vessels inspected and certificated for ocean or unlimited coastwise routes shall be considered suitable for navigation insofar as the provisions of this subchapter are concerned on any inland routes, including the Great Lakes.

§ 188.05–10 Application to vessels on an international voyage.

(a) Where, in various places or portions of this subchapter, requirements are stipulated specifically for "vessels on an international voyage", it is intended that these requirements apply only to vessels subject to the International Convention for Safety of Life at Sea, 1960, which are mechanically propelled vessels of 500 gross tons and over on an international voyage, as defined in § 188.10–35.

(1) The International Convention for Safety of Life at Sea, 1960, is not applicable to undocumented vessels, which are vessels numbered in accordance with the Federal Boating Act of 1958 (46 U.S.C. 527–527h).

(b) In accordance with Regulation 4, Chapter I (General Provisions), of the International Convention for Safety of Life at Sea, 1960, a vessel which is not normally engaged on an international voyage, but which in exceptional circumstances, is required to undertake a single international voyage may be exempted

by the Commandant from any of the requirements of the Regulations of the Convention: *Provided,* That it complies with safety requirements which are adequate, in his opinion, for the voyage which is to be undertaken.

(c) In accordance with Regulation 1(c), Chapter II (Construction), of the International Convention for Safety of Life at Sea, 1960, the Commandant may, if he considers that the sheltered nature and conditions of the voyage are such as to render the application of any specific requirements of Chapter II of this Convention unreasonable or unnecessary, exempt from those requirements individual vessels or classes of vessels which, in the course of their voyage, do not go more than 20 miles from the nearest land.

(d) In accordance with Regulation 3(a), Chapter III (Lifesaving Appliances, Etc.), of the International Convention for Safety of Life at Sea, 1960, the Commandant, if he considers that the sheltered nature and conditions of the voyage are such as to render the application of the full requirements of Chapter III of this Convention unreasonable or unnecessary, may to that extent exempt from the requirements of Chapter III individual vessels or classes of vessels which, in the course of their voyage, do not go more than 20 miles from the nearest land.

§ 188.05–30 Portable containers—interpretive rulings.

(a) The phrase "drums, barrels, or other packages," as used in R.S. 4417a, as amended (46 U.S.C. 391a), and in R.S. 4472, as amended (46 U.S.C. 170), is interpreted to mean portable containers having a maximum capacity of 110 U.S. gallons and ICC-specification cylinders having a water capacity of not more than 1,000 pounds, which are actually loaded and discharged from vessels with their contents intact.

(b) The phrase "inflammable or combustible liquid cargo in bulk" as used in R.S. 4417a, as amended (46 U.S.C. 391a), and in R.S. 4472, as amended (46 U.S.C. 170), is interpreted to include such cargo in portable containers of a capacity of more than 110 U.S. gallons.

(c) The phrase "liquid cargo" as used in R.S. 4417a, as amended (46 U.S.C. 391a), is interpreted to mean flammable or combustible liquids.

§ 188.05–33 Scientific personnel—interpretative rulings.

(a) Scientific personnel on oceanographic vessels are not considered to be seamen or passengers, but are considered as "persons" when requirements are based on total persons on board.

(b) Scientific personnel on such vessels shall not be required to possess seamen's documents nor shall they be required to sign shipping articles.

§ 188.05–35 Load lines—interpretative ruling.

(a) Certificated vessels shall be subject to the applicable provisions of the Load Line Acts, and regulations in Subchapter E (Load Lines) of this chapter.

§ 188.05–37 Numbered vessels not subject to International Convention for Safety of Life at Sea, 1960—interpretative ruling.

(a) Vessels numbered under the requirements of Federal Numbering Act and/or State Numbering Act as required by 46 U.S.C. 527a shall not be required to comply with the requirements of the International Convention for Safety of Life at Sea, 1960, even though making an international voyage.

Subpart 188.10—Definition of Terms Used in This Subchapter

§ 188.10–1 Approved.

This term means approved by the Commandant unless otherwise stated.

§ 188.10–3 Approved container.

This term means a container which is properly labeled, marked and approved by ICC for the commodity which it contains.

§ 188.10–5 Barge.

This term means any non-self-propelled vessel.

§ 188.10–7 Chemical stores.

This term means those chemicals intended for use in the performance of the vessel's scientific activities.

§ 188.10–9 Chemical storeroom.

This term refers to any compartment specifically constructed or modified for the stowage of chemical stores and so designated and identified.

§ 188.10–11 Chemistry laboratory.

This term refers to that laboratory used for chemical work. The term includes any space in which experiments are conducted or chemicals are used for scientific purposes in conjunction with the research mission of the vessel, and is so identified.

§ 188.10–13 Coast Guard District Commander.

This term means an officer of the Coast Guard designated as such by the Commandant to command all Coast Guard activities within his district, which include the inspection, enforcement, and administration of Title 52, Revised Statutes, and acts amendatory thereof or supplemental thereto, and rules and regulations thereunder.

§ 188.10–15 Coastwise.

Under this designation shall be included all vessels normally navigating the waters of any ocean or the Gulf of Mexico 20 nautical miles or less offshore.

§ 188.10–17 Combustible liquid.

This term includes any liquid whose flashpoint, as determined by an open cup tester, is above 80° F.

§ 188.10–19 Commandant.

This term means the Commandant of the Coast Guard.

§ 188.10–21 Compressed gas.

This term includes any material or mixture having in the container an absolute pressure exceeding 40 p.s.i. at 70° F.; or regardless of the pressure at 70° F., having an absolute pressure exceeding 104 p.s.i. at 130° F.; or any liquid flammable material having a vapor pressure exceeding 40 p.s.i. absolute at 100° F. as determined by the Reid method covered by the American Society for Testing Materials Method of Test for Vapor Pressure of Petroleum Products (D–323). Compressed gases are discussed in more detail in Subpart 146.24 of Subchapter N (Dangerous Cargoes) of this chapter.

§ 188.10–23 Corrosive liquids.

(a) This term includes those acids, alkaline caustic liquids, and other corrosive liquids which, when in contact with living tissues, will cause severe damage of such tissues by chemical action; or in case of leakage, will materially damage or destroy other freight by chemical action, or are liable to cause fire when in contact with organic matter or with certain chemicals.

(b) A corrosive substance may be:

(1) Solid, such as iodine; or,

(2) Liquid, such as acids, or caustic soda solution; or,

(3) Gaseous, such as chlorine or sulfur dioxide.

§ 188.10–25 Explosive.

This term means a chemical compound or mixture, the primary purpose of which is to function by explosion; i.e., with substantially instantaneous release of gas and heat. Explosives are discussed in more detail in Subpart 146.20 of Subchapter N (Dangerous Cargoes) of this chapter.

§ 188.10–27 Flammable liquid.

This term includes any liquid whose flashpoint, as determined by an open cup tester, is 80° F. or below.

§ 188.10–31 Great Lakes.

Under this designation shall be included all vessels navigating the Great Lakes.

§ 188.10–33 Headquarters.

This term means the Office of the Commandant, U.S. Coast Guard, Washington, D.C.

§ 188.10–35 International voyage.

(a) The term "international voyage" as used in this subchapter shall have the same meaning as that contained in Regulation 2(d), Chapter I of the International Convention for Safety of Life at Sea, 1960, i.e., "International voyage means a voyage from a country to which the present Convention applies to a port outside such country, or conversely; and for this purpose every territory for the international relations of which a contracting Government is responsible or for which the United Nations are the administering authority is regarded as a separate country."

(b) The International Convention for Safety of Life at Sea, 1960, does not apply to vessels "solely navigating the Great Lakes of North America and the River St. Lawrence as far east as a straight line drawn from Cap de Rosiers

to West Point, Anticosti Island and, on the north side of Anticosti Island, the 63d Meridian." Accordingly, such vessels shall not be considered as being on an "international voyage" for the purpose of this subchapter.

(c) For the purposes of this subchapter the term "territory" as used in paragraph (a) of this section shall be considered to include the Commonwealth of Puerto Rico, the Canal Zone, all possessions of the United States, and all lands held by the United States under a protectorate or mandate.

(d) In addition, although voyages between the continental United States and Hawaii or Alaska, and voyages between Hawaii and Alaska are not "International voyages" under the provisions of the International Convention for Safety of Life at Sea, 1960, such voyages are similar in nature and shall be considered as "International voyages" and subject to the same requirements for the purposes of this subchapter.

§ 188.10–37 Label.

This term means the caution label required by Part 146 of Subchapter N (Dangerous Cargoes) of this chapter and the regulations of the ICC to be affixed to outside containers of explosives or other dangerous articles or substances.

§ 188.10–39 Lakes, bays, and sounds.

Under this designation shall be included all vessels navigating the waters of any of the lakes, bays, or sounds, other than the waters of the Great Lakes.

§ 188.10–41 Liquefied compressed gas.

This term means a gas which, under the charged pressure, is partially liquid at a temperature of 70° F.

§ 188.10–43 Liquefied flammable gas.

This term means any flammable gas having a Reid vapor pressure exceeding 40 p.s.i. which has been liquefied.

§ 188.10–45 Marine inspector or inspector.

These terms mean any person from the civilian or military branch of the Coast Guard assigned under the superintendence and direction of an Officer in Charge, Marine Inspection, or any person as may be designated for the performance of duties with respect to the inspection, enforcement, and administration to Title 52, Revised Statutes, and acts amendatory thereof or supplemental thereto, and rules and regulations thereunder.

§ 188.10–47 Nuclear vessel.

This term means a vessel provided with a nuclear powerplant for propulsion or any other purpose, or any vessel handling or processing substantial amounts of radioactive material.

§ 188.10–49 Numbered vessel.

This term means a vessel which is numbered under the provisions of the Federal Boating Act of 1958 (46 U.S.C. 527–527h).

§ 188.10–51 Ocean.

Under this designation shall be included all vessels navigating the waters of any ocean, or the Gulf of Mexico more than 20 nautical miles offshore.

§ 188.10–15 Oceanographic vessel.

This term means an "oceanographic research vessel" as defined in section 441 of 46, U.S. Code, and is a vessel which "is being employed exclusively in oceanographic research, including, but not limited to, such studies pertaining to the sea as seismic, gravity meter and magnetic exploration and other marine geophysical or geological surveys, atmospheric research, and biological research." Such a vessel shall not be deemed to be engaged in trade or commerce (46 U.S.C. 443).

§ 188.10–55 Officer in Charge, Marine Inspection.

This term means any person from the civilian or military branch of the Coast Guard designated as such by the Commandant and who, under the superintendence and direction of the Coast Guard District Commander, is in charge of an inspection zone for the performance of duties with respect to the inspections, enforcement, and administration of Title 52, Revised Statutes, and acts amendatory thereof or supplemental thereto, and rules and regulations thereunder.

§ 188.10–59 Recognized classification society.

This term means the American Bureau of Shipping or other classification society recognized by the Commandant.

§ 188.10–61 Rivers.

Under this designation shall be included all vessels whose navigation is restricted to rivers and/or canals exclusively, and to such other waters as may be so designated by the Coast Guard District Commander.

§ 188.10–63 Rules of the Road.

(a) This term means the statutory and regulatory rules governing navigation of vessels. These rules are also published by the Coast Guard in pamphlet form as follows:

(1) Rules of the Road—International—Inland (CG–169).

(2) Rules of the Road—Great Lakes (CG–172).

(3) Rules of the Road—Western Rivers (CG–184).

(b) The current editions of the Rules of the Road pamphlets may be obtained from any Marine Inspection Office.

§ 188.10–65 Seagoing barge.

The phrase "every seagoing barge of one hundred gross tons or over" in subsections 395(a) and 395(b), Title 46 U.S. Code (Sec. 10, 35 Stat. 428, as amended), includes every non-self-propelled vessel of 100 gross tons or over, if such vessel will navigate the high seas or ocean. The phrase "non-self-propelled vessel" means a vessel without sufficient means for self-propulsion and is required to be towed.

§ 188.10–67 Scientific equipment.

This term means equipment installed or carried on board an oceanographic vessel and not normally required for the operation of a vessel or its machinery or for the navigation of the vessel, and which is used primarily in the gathering of scientific data or samples or in processing, analyzing, preserving, or storing such data or samples.

§ 188.10–69 Scientific laboratory.

This term means those spaces on board an oceanographic research vessel used primarily for scientific experimentation or research, and are so identified.

§ 188.10–71 Scientific personnel.

This term means those persons who are aboard an oceanographic vessel solely for the purpose of engaging in scientific research, or in instructing, or receiving instruction, in oceanography or limnology, and shall not be considered seamen under the provisions of Title 53 of the Revised Statutes and acts amendatory thereof or supplementary thereto.

§ 188.10–73 Ships' stores and supplies.

This term means any article or substance which is used on board a vessel subject to the appropriate portions of Parts 146 or 147 of Subchapter N (Dangerous Cargoes) of this chapter for the upkeep and maintenance of the vessel; or for the safety or comfort of the vessel, its passengers or crew; or for the operation or navigation of the vessel (except fuel for its own machinery).

§ 188.10–75 Undocumented vessel.

This term means any vessel which is not required to have, and does not have, a valid marine document by the Bureau of Customs.

§ 188.10–77 Vessel.

Where the word "vessel" is used in this subchapter, it shall be considered to include all inspected and certificated oceanographic vessels as listed in Column 7 of Table 188.05–1(a).

Subpart 188.15—Equivalents

§ 188.15–1 Conditions under which equivalents may be used.

(a) Where in this subchapter it is provided that a particular fitting, material, appliance, apparatus, or equipment, or type thereof, shall be fitted or carried in a vessel, or that any particular provision shall be made or arrangement shall be adopted, the Commandant may accept in substitution therefor any other fitting, material, apparatus, or equipment, or type thereof, or any other arrangement: *Provided*, That he shall have been satisfied by suitable trials that the fitting, material, appliance, apparatus, or equipment, or type thereof, or the provision or arrangement is at least as effective as that specified in this subchapter.

(b) In any case where it is shown to the satisfaction of the Commandant that the use of any particular equipment, apparatus, or arrangement not specifically

required by law is unreasonable or impracticable, the Commandant may permit the use of alternate equipment, apparatus, or arrangement to such an extent and upon such conditions as will insure, to his satisfaction, a degree of safety consistent with the minimum standards set forth in this subchapter.

§ 188.15–5 Design of vessels.

(a) In order not to inhibit design and application the Commandant may accept vessels of unusual, unique, special, or exotic design, both new and for conversion, after it is shown to his satisfaction that such a vessel is at least as safe as any vessel which meets the standards required by this subchapter.

Subpart 188.20—General Marine Engineering Requirements

§ 188.20–1 Marine engineering details.

(a) The marine engineering details shall be in accordance with Subchapter F (Marine Engineering) of this chapter.

§ 188.20–5 Nuclear vessels.

(a) Nuclear vessels shall comply with the applicable requirements in Subpart 57.30 of Part 57 of Subchapter F (Marine Engineering) of this chapter.

Subpart 188.25—General Electrical Engineering Requirements

§ 188.25–1 Electrical engineering details.

(a) The electrical engineering details shall be in accordance with Subchapter J (Electrical Engineering) of this chapter.

Subpart 188.35—American Bureau of Shipping's Standards

§ 188.35–1 Standards to be used.

(a) Where in this subchapter an item, or method of construction, or testing is required to meet the standards established by the American Bureau of Shipping, the current standards in effect at the time of construction of the vessel, or otherwise as applicable, shall be used.

(b) The current standards of other recognized classification societies may also be accepted upon approval by the Commandant.

§ 188.35–5 Where obtainable.

(a) The standards established by the American Bureau of Shipping are usually published annually and may be purchased from the American Bureau of Shipping, 45 Broad Street, New York, N.Y. 10004.

(b) These standards may also be examined at the Office of the Commandant (M), U.S. Coast Guard, Washington, D.C., or at the Office of any Coast Guard District Commander or Officer in Charge, Marine Inspection.

PART 189—INSPECTION AND CERTIFICATION

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Subpart 189.50—Special Operating Requirements

189.50–1 Inspection and testing required when making alterations, repairs, or other such operations involving riveting, welding, burning, or like fire-producing actions.

Subpart 189.55—Plan Approval

189.55–1 General.
189.55–5 Plans and specifications required for new construction.
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Subpart 189.60—Certificates Under International Convention for Safety of Life at Sea, 1960

Sec.
189.60–1 Application.
189.60–5 Cargo Ship Safety Construction Certificate.
189.60–10 Cargo Ship Safety Equipment Certificate.
189.60–15 Cargo Ship Safety Radiotelegraphy Certificate.
189.60–20 Cargo Ship Safety Radiotelephony Certificate.
189.60–25 Exemption Certificate.
189.60–30 Nuclear Cargo Ship Safety Certificate.
189.60–35 Posting of Convention certificates.
189.60–40 Duration of certificates.
189.60–45 American Bureau of Shipping.

AUTHORITY: The provisions of this Part 189 issued under R.S. 4405, as amended, 4462, as amended, and sec. 5, 79 Stat. 424; 46 U.S.C. 375, 416, 445. Interpret or apply R.S. 4417, as amended, 4418, as amended, 4472, as amended, 4488, as amended, 4491, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended, sec. 17, 54 Stat. 166, as amended; 46 U.S.C. 391, 392, 170, 481, 489, 395, 363, 367, 526p; E.O. 11239, July 31, 1965, 30 F.R. 9671, 3 CFR, 1965 Supp. Treasury Dept. Orders 120, July 31, 1950, 15 F.R. 6521; CGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–66, Sept. 8, 1965, 30 F.R. 11735, unless otherwise noted.

Subpart 189.01—Certificate of Inspection

AUTHORITY: The provisions of this Subpart 189.01 interpret or apply R.S. 4421, as amended, 4423, as amended, sec. 12, 35 Stat. 428, as amended; 46 U.S.C. 399, 400, 397.

§ 189.01–1 When required.

(a) Except as noted in this subpart or Subpart 189.05 of this part, no vessel subject to inspection and certification shall be operated without a valid certificate of inspection.

§ 189.01–5 Posting.

(a) The original certificate of inspection shall, in general, be framed under glass or other transparent material and posted in a conspicuous place where it will be most likely to be observed. On other vessels such as barges, where the framing of the certificate under glass would be impracticable, the original certificate of inspection shall be kept on board to be shown on demand.

§ 189.01–10 Period of validity.

(a) Certificates of inspection will be issued for periods of either 1 or 2 years. Application may be made by the master, owner, or agent for inspection and issuance of a new certificate of inspection at any time during the period of validity of the current certificate. For nuclear vessels, the period of validity shall be 1 year.

(b) Certificates of inspection may be revoked or suspended by the Coast Guard where such process is authorized by law. This may occur if the vessel does not meet the requirements of law or regulations in this chapter or if there is a failure to maintain the safety requirements requisite to the issuance of a certificate of inspection.

(c) (1) In the case of the following vessels, modification of the period of validity of the certificate of inspection

will be permitted as set forth in this paragraph:

(i) Non-self-propelled vessels of 100 gross tons and over proceeding on the high seas or ocean for the sole purpose of changing place of employment.

(ii) Non-self-propelled vessels of 100 gross tons and over making rare or infrequent voyages on the high seas or ocean and returning to the port of departure.

(2) The certificate of inspection may be issued for a specific period of time to cover a described situation or for one voyage only but in no case to exceed 2 years. The certificate of inspection will include the conditions under which the vessel must operate. Unless the vessel is in compliance with this subchapter insofar as it applies to seagoing barges of 100 gross tons and over, such vessel shall not carry any person on board while underway, and the certificate of inspection will be endorsed as an unmanned seagoing barge.

§189.01–15 Temporary certificate.

(a) If necessary to prevent delay of the vessel, a temporary certificate of inspection, Form CG–854, shall be issued pending the issuance and delivery of the regular certificate of inspection. Such temporary certificate shall be carried in the same manner as the regular certificate and shall in all ways be considered the same as the regular certificate of inspection which it represents.

Subpart 189.05—Permit To Proceed to Another Port for Repair

AUTHORITY: The provisions of this Subpart 189.05 interpret or apply R.S. 4453, as amended; 46 U.S.C. 435.

§ 189.05–1 When issued.

(a) The Officer in Charge, Marine Inspection, may issue a permit to proceed to another port for repair, Form CG–948, to a vessel, if in his judgment it can be done with safety, even if the certificate of inspection of the vessel has expired or is about to expire.

§ 189.05–5 To whom issued.

(a) Such permit will only be issued upon the written application of the master, owner, or agent of the vessel.

§ 189.05–10 Conditions of permit.

(a) The permit will state upon its face the conditions under which it is issued.

§ 189.05–15 Posting.

(a) The permit shall be carried in a manner similar to that described in § 189.01–5 for a certificate of inspection.

Subpart 189.15—Inspection of Vessels

§ 189.15–1 Standard in inspection of hulls, boilers, and machinery.

(a) In the inspection of hulls, boilers, and machinery of vessels, the standards established by the American Bureau of Shipping, see Subpart 188.35 of this subchapter, respecting material and construction of hulls, boilers, and machinery, and the certificate of classification referring thereto, except where otherwise provided for by the rules and regulations in this subchapter, Subchapter E (Load Lines), Subchapter F (Marine Engineering), or Subchapter J (Electrical Engineering) of this chapter shall be accepted as standard by the inspectors.

Subpart 189.20—Initial Inspection

§ 189.20–1 Prerequisite of certificate of inspection.

(a) The initial inspection is a prerequisite of the issuance of the original certificate of inspection.

§ 189.20–5 When made.

(a) The initial inspection will only be made upon the written application of the owner or builder of the vessel to the Officer in Charge, Marine Inspection, on Form CG–3752, Application for Inspection of U.S. Vessel, at or nearest the port where the vessel is located.

§ 189.20–10 Plans.

(a) Before application for inspection is made, and before construction is started, the owner or builder shall have plans approved by the Commandant indicating the proposed arrangement and construction of the vessel.

(b) The procedure for submitting plans and the list of plans to be supplied is set forth in Subpart 189.55 of this part.

§ 189.20–15 Scope of inspection.

(a) The initial inspection, which may consist of a series of inspections during the construction of a vessel, shall include a complete inspection of the structure, machinery, and equipment, except scientific equipment which does not affect the safety of the vessel or personnel, but including the outside of the vessel's bottom, and the inside and outside of the boilers and unfired pressure vessels. The inspection shall be such as to insure that the arrangements, materials, and scantlings of the structure, boilers and other pressure vessels and their appurtenances, piping, main and auxiliary machinery, electrical installations, lifesaving appliances, fire detecting and extinguishing equipment, pilot ladders, and other equipment fully comply with the applicable regulations for such vessel and are in accordance with approved plans, and determine that the vessel is in possession of a valid certificate issued by the Federal Communications Commission, if any. The inspection shall also be such as to insure that the workmanship of all parts of the vessel and its equipment is in all respects satisfactory, and that the vessel is provided with lights, means of making sound signals and distress signals as required by applicable regulations and the applicable "Rules of the Road."

(b) When equipment other than scientific equipment is installed which is not required by the applicable regulations in this subchapter, that equipment shall be inspected and tested as may be required for such equipment by the Officer in Charge, Marine Inspection, to assure safety.

(1) All scientific equipment and their electrical or pressure connections to the ship's supply shall be designed to good commercial standards and shall be free of personnel hazards caused by shock, temperature extremes, and moving parts.

(c) For nuclear vessels, the inspections required by this section shall be made except insofar as they may be limited by the presence of radiation. In addition, the inspection shall include any special requirements of the vessel's "Safety Assessment."

§ 189.20–20 Specific tests and inspections.

(a) The applicable tests and inspections as set forth in Subpart 189.25 of this part shall be made at this time. In addition, the following specific tests and inspections shall be made by the marine inspector.

(1) Installation of lifeboats, davits, and winches. See Subpart 192.35 of this subchapter.

(2) Installation of carbon dioxide extinguishing piping. See § 193.15–15 of this subchapter.

(3) Marine engineering equipment and systems. See Subchapter F (Marine Engineering) of this chapter.

(4) Electrical engineering equipment and systems. See Subchapter J (Electrical Engineering) of this chapter.

§ 189.20–25 Chemical and explosive hazards.

(a) If installed, the marine inspector shall examine the chemistry laboratory, scientific laboratory, chemical storeroom, magazines, vans and chests to insure that the workmanship and arrangements are satisfactory and the chemical and explosive hazards are minimized.

Subpart 189.25—Inspection for Certification

§ 189.25–1 Prerequisite of reissuance of certificate of inspection.

(a) An inspection for certification is a prerequisite of the reissuance of a certificate of inspection.

§ 189.25–5 When made.

(a) The inspection for certification will be made only upon written application of the master, owner, or agent of the vessel on Form CG–3752, Application for Inspection of U.S. Vessel, to the Officer in Charge, Marine Inspection, at or nearest the port where the vessel is located.

§ 189.25–10 Scope of inspection.

(a) The inspection for certification shall include an inspection of the structure, boilers, and other pressure vessels, machinery, and equipment. The inspection shall be such as to insure that the vessel, as regards the structure, boilers, and other pressure vessels and their appurtenances, piping, main and auxilliary machinery, electrical installations, lifesaving appliances, fire detecting and extinguishing equipment, pilot ladders, and other equipment, is in satisfactory condition and fit for the service for which it is intended, and that it complies with the applicable regulations for such vessel, and determine that the vessel is in possession of a valid certificate issued by the Federal Communications Commission, if required. The lights and means

of making sound signals carried by the vessel shall also be subject to the above-mentioned inspection for the purpose of insuring that they comply with the requirements of the applicable regulations and the applicable "Rules of the Road."

(b) For nuclear vessels, the inspections required by this section shall be made except insofar as they may be limited by the presence of radiation. In addition, the inspection shall include any special requirements of the vessel's "Safety Assessment."

(c) When equipment other than scientific equipment is installed which is not required by the applicable regulations in this subchapter, that equipment shall be inspected and tested as may be required for such equipment by the Officer in Charge, Marine Inspection, to assure safety.

(1) Scientific equipment and their electrical or pressure connections to the ship's supply will be checked to ascertain that it is maintained free of personnel hazards caused by shock, temperature extremes, and moving parts.

§ 189.25–15 Lifesaving equipment.

(a) At each inspection for certification, except as modified in subparagraph (2) of this paragraph, the marine inspector shall conduct the following tests and inspections of lifesaving equipment:

(1) It shall be demonstrated that the air tanks of all lifesaving appliances are airtight.

(2) Each lifeboat shall be lowered to near the water and then be loaded with its allowed capacity, evenly distributed throughout the length, and then be lowered into the water until it is afloat, and be released from the falls. In making this test persons or deadweight may be used. The total weight used shall be at least equal to the allowed capacity of the lifeboat considering persons to weigh 165 pounds each. This test shall be made at least once in each 2-year period. If practicable it shall be made at the inspection for certification or at a reinspection.

(3) Each life preserver shall be examined to determine its serviceability. If found to be satisfactory, it will be stamped "Passed," together with the date, the port, and the inspector's initials. If not in a serviceable condition, the life preserver shall be removed from the vessel, and if beyond repair, shall be destroyed in the presence of the inspector.

(4) All lifeboat winch electrical control apparatus shall be opened up and inspected.

(5) Where gravity davits are installed, it shall be demonstrated that the lifeboat can be swung out and lowered from any stopped position by merely releasing the brake on the lifeboat winch. The use of force to start the davits or the lifeboat winch will not be permitted.

(6) Inflatable liferafts shall be serviced at an approved servicing facility in accordance with the provisions of Subpart 160.051 of Subchapter Q (Specifications) of this chapter. Inflatable liferafts shall be serviced at an approved servicing facility every 12 months or not later than the next vessel inspection for certification provided the total time since date of last servicing does not exceed 15 months. The period for servicing is computed from the date of last servicing. Except in emergencies no servicing should be done aboard vessels. If at any time external damage is found to the container or straps or if the seal is broken, the Officer in Charge, Marine Inspection, shall be notified and the raft may be required to be serviced by an approved servicing facility.

NOTE: After the raft has been satisfactorily serviced in the presence of a marine inspector at an approved servicing facility, the raft is repacked and sealed and the carrying case stamped "PASSED" together with the date, port, and the marine inspector's initials.

(7) All other items of lifesaving equipment shall be examined to determine that they are in suitable condition.

§ 189.25–20 Fire-extinguishing equipment.

(a) At each inspection for certification and at such other times as considered necessary the inspector shall determine that all fire-extinguishing equipment is in suitable condition and he may require such tests as are considered necessary to determine the condition of the equipment. The inspector shall determined if the tests and inspections required by § 196.15–60 of this subchapter have been conducted. At each inspection for certification the inspector shall conduct the following tests and inspections of fire-extinguishing equipment:

(1) All hand portable fire extinguishers and semiportable fire-extinguishing systems shall be checked as noted in Table 189.25–20(a)(1). In addition, the hand portable fire extinguishers and semiportable fire-extinguishing systems shall be examined for excessive corrosion and general condition.

TABLE 189.25–20(a)(1)

Type unit	*Test*
Soda acid	Discharge. Clean hose and inside of extinguisher thoroughly. Recharge.
Foam	Discharge. Clean hose and inside of extinguisher thoroughly. Recharge.
Pump tank (water or antifreeze)	Discharge. Clean hose and inside of extinguisher thoroughly. Recharge with clean water or antifreeze.
Cartridge operated (water, antifreeze, or loaded stream).	Examine pressure cartridge and replace if end is punctured or if cartridge is otherwise determined to have leaked or to be in unsuitable condition. Remove liquid. Clean hose and inside of extinguisher thoroughly. Recharge with water, solution, or antifreeze. Insert charged cartridge.
Carbon dioxide	Weigh cylinders. Recharge if weight loss exceeds 10 percent of weight of charge. Inspect hose and nozzle to be sure they are clear.[1]
Dry chemical (cartridge-operated type).	Examine pressure cartridge and replace if end is punctured or if cartridge is otherwise determined to have leaked or to be in unsuitable condition. Inspect hose and nozzle to see they are clear. Insert charged cartridge. Be sure dry chemical is free-flowing (not caked) and chamber contains full charge.
Dry chemical (stored pressure type).	See that pressure gage is in operating range. If not, or if seal is broken, weigh or otherwise determine that full charge of dry chemical is in extinguisher. Recharge if pressure is low or if dry chemical is needed.
Vaporizing liquid[2]	----------

[1] Cylinder shall be tested and marked in accordance with the regulations of the Interstate Commerce Commission, as noted in § 147.04–1 of Subchapter N (Dangerous Cargoes) of this chapter.

[2] Vaporizing-liquid type fire extinguishers containing carbon tetrachloride or chlorobromomethane or other toxic vaporizing liquids are not permitted.

(2) Fixed fire-extinguishing systems shall be checked as noted in Table 189.25–20(a)(2). In addition, all parts of the fixed fire-extinguishing systems shall be examined for excessive corrosion and general conditions.

TABLE 189.25–20(a)(2)

Type system	*Test*
Foam	Systems utilizing a soda solution shall have such solution replaced. In all cases, ascertain that powder is not caked.
Carbon dioxide	Weigh cylinders. Recharge if weight loss exceeds 10 percent of weight of charge.[1]

[1] Cylinders shall be tested and marked in accordance with regulations of the Interstate Commerce Commission, as noted in § 147.04–1 of Subchapter N (Dangerous Cargoes) of this chapter.

NOTE: Section 147.04–1 of Subchapter N of this chapter includes requirements that such cylinders shall be retested and re-marked under the following conditions; (1) Whenever a cylinder is recharged or for any cause removed from a vessel subsequent to 5 years from the latest test date stamped on the shoulder of the cylinder; or (2) whenever a cylinder remains in place on a vessel for 12 years from the latest test date stamped on the shoulder of the cylinder. Cylinders retested under any of the above conditions shall have new or renewed valve and safety relief devices of the proper design installed in the cylinder.

(3) On all fire-extinguishing systems all piping, controls, valves, and alarms shall be checked to ascertain that the system is in operating condition.

(4) The fire main system shall be operated and the pressure checked at the outlets having the greatest pressure drop between the fire pumps and the nozzles which may not always be the most remote and highest outlets. All firehoses shall be subjected to a test pressure equivalent to the maximum pressure to which they may be subjected in service, but not less than 100 p.s.i.

§ 189.25–25 Hull equipment.

(a) At each inspection for certification the inspector shall conduct the following tests and inspections of hull equipment:

(1) All watertight doors shall be operated locally by manual power and also by hydraulic or electric power if so fitted. Where remote control is fitted, the doors shall also be operated by the remote control apparatus.

(2) The remote controls of all valves shall be operated.

(3) An inspection of the weight handling gear shall be required. The inspection may consist of tests and examinations to determine the condition and suitability of the gear. Current valid certificates and registers, issued by a recognized nonprofit organization or association approved by the Commandant, may be accepted as prima facie evidence of the condition and suitability of the weight handling gear. Weight handling gear certificates and registers will not be issued by the Coast Guard.

§ 189.25–30 Electrical engineering equipment.

(a) For inspection procedures of Electrical Engineering equipment and systems, see Subchapter J (Electrical Engineering) of this chapter.

§ 189.25–35 Marine engineering equipment.

(a) For inspection procedures of Marine Engineering equipment and systems, see Subchapter F (Marine Engineering) of this chapter.

§ 189.25–40 Sanitary inspection.

(a) At each inspection for certification, the quarters, toilets, and washing spaces, galleys, serving pantries, lockers, etc., shall be examined by the marine inspector to be assured that they are in a sanitary condition.

(Sec. 4, 49 Stat. 1935, as amended; 46 U.S.C. 660a)

§ 189.25–45 Fire hazards.

(a) At each inspection for certification, the inspector shall examine the tank tops and bilges in the machinery spaces to see that there is no accumulation of oil which might create a fire hazard.

§ 189.25–47 Chemical and explosive hazards.

(a) The marine inspector shall inspect every chemistry laboratory, scientific laboratory, and chemical storeroom during each inspection for certification.

(b) Magazines, vans, and chests shall be inspected during each inspection for certification.

§ 189.25–50 Inspector not limited.

(a) Nothing in this subpart shall be construed as limiting the inspector from making such tests or inspections as he deems necessary to be assured of the safety and seaworthiness of the vessel.

Subpart 189.27—Reinspection

§ 189.27–1 When made.

(a) At least one reinspection shall be made on each vessel holding a certificate of inspection valid for 2 years. This reinspection will be made, where possible, between the 10th and 14th months of the period for which the certificate is valid.

(b) No written application for reinspection will be required.

§ 189.27–5 Scope.

(a) The marine inspector shall examine all accessible parts of the vessel's hull, machinery, and equipment to be assured that it is in a satisfactory condition, except scientific equipment which does not affect the safety of the vessel or personnel.

(b) In general, the scope of the reinspection shall be the same as for the inspection for certification, but will be in less detail unless it is determined that a major change has occurred since the last inspection.

§ 189.27–10 Deficiencies in maintenance.

(a) If the reinspection reveals deficiencies in the maintenance as called for by the regulations in this subchapter, such necessary repairs or improvements shall be made as may be ordered.

§ 189.27–15 Inspector not limited.

(a) Nothing in this subpart shall be construed as limiting the marine inspector from making such tests or inspections as he deems necessary to be assured of the seaworthiness of the vessel.

Subpart 189.30—Inspection After Accident

§ 189.30–1 General or partial survey.

(a) A survey, either general or partial, according to the circumstances, shall be made every time an accident occurs or a defect is discovered which affects the safety of the vessel or the efficacy or completeness of its lifesaving appliances, firefighting or other equipment, or whenever any important repairs or renewals are made. The survey shall be such as to insure that the necessary repairs or renewals have been effectively made, that the material and the workmanship of such repairs or renewals are in all respects satisfactory, and that the vessel complies in all respects with the regulations in this subchapter.

(R.S. 4450, as amended; 46 U.S.C. 239)

Subpart 189.33—Sanitary Inspections

§ 189.33–1 When made.

(a) An inspection of quarters, toilet and washing spaces, serving pantries, galleys, etc., shall be made at least once in every month. If the route of the vessel is such that it is away from a U.S. port for more than 1 month, an inspection shall be conducted at least once every trip.

(Sec. 4, 49 Stat. 1935, as amended; 46 U.S.C. 660a)

Subpart 189.35—Inspection of Weight Handling Gear

§ 189.35–1 When made.

(a) Inspections and tests of weight handling gear shall be made at the time of the initial inspection for certification, during reinspection of the vessel, or as deemed necessary by the Officer in Charge, Marine Inspection.

§ 189.35–3 Inspections.

(a) Inspections will normally consist of a visual examination with access covers removed. Suitability of the equipment for the service intended will be emphasized.

(b) Disassembly of the equipment will be required only when there is a suspected deficiency or unsafe condition.

§ 189.35–5 Tests.

(a) Tests should normally consist of exercising the equipment as a unit with a proof load 25 percent in excess of the equipment's normal rated capacity. Test loads should not exceed design loads or manufacturer's limitations. The 25 percent excess proof load may be modified as circumstances warrant.

(b) Braking, safety, and limiting devices shall be tested whenever possible. Equipment so tested shall be suitably marked with the test load, date, and any other pertinent information by means of a permanently attached plate.

§ 189.35–7 Plans.

(a) Four (4) sets of plans for weight handling gear shall be submitted for review. These plans shall include:

(1) One line electrical diagrams showing appropriate overload protection as currently required by Subchapter J (Electrical Engineering) of this chapter.

(2) Plans showing the hydraulic or pneumatic equipment, which should be in compliance with Subpart 55.17 of Part 55 of Subchapter F (Marine Engineering) of this chapter.

(3) Stress and/or arrangement diagrams, as appropriate to the specific equipment in question, with supporting design calculations for the equipment designed to handle loads of 1 ton or more. In lieu of design calculations, purchase specifications or vendor's information may be accepted as sufficiently definitive on materials, design (safety) factors, and operating limitations.

(b) The owner shall provide the master for maintenance on the vessel one set of plans of the weight handling gear. These plans shall be made available to the marine inspector upon request.

Subpart 189.40—Drydocking

§ 189.40–1 When required.

(a) Except for extensions as authorized by the Commandant, all vessels shall be placed in drydock or hauled out for

examination within the periods set forth in this paragraph, depending upon the service.

(1) Each vessel should be drydocked or hauled out at intervals not to exceed 18 months if it operates in salt water an aggregate of more than 9 months in the 18-month period since it was last drydocked or hauled out.

(2) Each vessel shall be drydocked or hauled out at intervals not to exceed 36 months if it operates in salt water an aggregate of more than 3 months but not more than 6 months in each 12-month period since it was last drydocked or hauled out. When a vessel exceeds an aggregate of 6 months service in salt water in any 12-month period since it was last drydocked or hauled out, it shall be drydocked or hauled out within 6 months after the end of that period or within the 36-month interval, whichever is earlier.

(3) Each vessel shall be drydocked or hauled out at intervals of 48 months if it operates in salt water an aggregate of more than 1 month but not more than 3 months in each 12-month period since it was last drydocked or hauled out.

(4) Each vessel shall be drydocked or hauled out at intervals not to exceed 60 months if it operates in salt water an aggregate not exceeding 1 month in each 12-month period since it was last drydocked or hauled out.

§ 189.40–5 Notice by owner.

(a) The master, owner, or agent shall notify the Officer in Charge, Marine Inspection, when any vessel is to be placed on a drydock in order that an examination of the underwater portion of the vessel may be made if deemed necessary.

Subpart 189.45—Repairs and Alterations

§ 189.45–1 Notice required.

(a) No repairs or alterations affecting the stability or safety of the vessel with regard to the hull, machinery, and equipment shall be made without the knowledge of the Officer in Charge, Marine Inspection.

(b) Drawings of alterations shall be approved before work is started unless deemed unnecessary by the Officer in Charge, Marine Inspection.

(c) Drawings will not be required for repairs in kind.

(d) Notice is not required for repairs or alterations to scientific equipment where the stability or safety of the vessel with regard to the hull and machinery or equipment is not affected.

§ 189.45–5 Inspection required.

(a) An inspection, either general or partial depending upon the circumstances, shall be made whenever any important repairs or alterations are undertaken.

Subpart 189.50—Special Operating Requirements

§ 189.50–1 Inspection and testing required when making alterations, repairs, or other such operations involving riveting, welding, burning, or like fire-producing actions.

(a) The provisions of "Standard for the Control of Gas Hazards on Vessels To Be Repaired," NFPA No. 306, published by National Fire Protection Association, 60 Batterymarch Street, Boston, Mass. 02110, shall be used as a guide in conducting the inspections and issuance of certificates required by this section.

(b) Until an inspection has been made to determine that such operation can be undertaken with safety, no alterations, repairs, or other such operations involving riveting, burning, welding, or like fire-producing actions shall be made:

(1) Within or on the boundaries of tanks which have been used to carry combustible liquids or chemicals; or,

(2) Within spaces adjacent to tanks which have been used to carry Grade D combustible liquids, except where the distance between such tanks and the work to be performed is not less than twenty-five (25) feet; or,

(3) Within or on the boundaries of fuel tanks; or,

(4) Within or on the boundaries of tanks carrying Grade B or Grade C flammable liquids or within spaces adjacent to such tanks; or,

(5) To pipelines, heat coils, pumps, fittings, or other appurtenances connected to such fuel tanks.

(c) Such inspections shall be made and evidenced as follows:

(1) In ports or places in the United States or its territories and possessions the inspection shall be made by a marine chemist certificated by the National Fire Protection Association; however, if the services of such certified marine chemist are not reasonably available, the Officer in Charge, Marine Inspection, upon the recommendation of the vessel owner and his contractor or their representative shall select a person who, in the case of an individual vessel, shall be authorized to make such inspection. If the inspection indicates that such operations can be undertaken with safety, a certificate setting forth the fact in writing and qualified as may be required, shall be issued by the certified marine chemist or the authorized person before the work is started. Such qualifications shall include any requirements as may be deemed necessary to maintain, insofar as can reasonably be done, the safe conditions in the spaces certified throughout the operation and shall include such additional tests and certifications as considered required. Such qualifications and requirements shall include precautions necessary to eliminate or minimize hazards that may be present from protective coatings or residues from cargoes.

(2) When not in such a port or place, and a marine chemist or such person authorized by the Officer in Charge, Marine Inspection, is not reasonably available, the inspection shall be made by the senior officer in the crew present and a proper entry shall be made in the vessel's logbook.

(d) It shall be the responsibility of the senior officer present to secure copies of certificates issued by the certified marine chemist or such person authorized by the Officer in Charge, Marine Inspection. It shall be the responsibility of the senior officer in the crew present, insofar as the persons under his control are concerned, to maintain a safe condition on the vessel by full observance of all qualifications and requirements listed by the marine chemist in the certificate.

Subpart 189.55—Plan Approval

§ 189.55–1 General.

(a) The following list of required plans in § 189.55–5 is general in character, but includes all plans which normally show construction and safety features coming under the cognizance of the Coast Guard. In the case of a particular vessel, all of the plans enumerated may not be applicable and it is intended that only those plans and specifications be submitted as will clearly show the vessel's arrangements, construction and required equipment.

(b) In the following list of required plans in § 189.55–5, the items which must be approved by the American Bureau of Shipping for vessels classed by that organization are indicated by an asterisk. When prints bearing record of such approval by the American Bureau of Shipping are forwarded to the Coast Guard they will in general be accepted as satisfactory except insofar as the law or the Coast Guard regulations contain requirements which are not covered by the American Bureau of Shipping.

§ 189.55–5 Plans and specifications required for new construction.

(a) *General.* (1) Specifications.

(2) General arrangement plan of decks, holds, inner bottoms, etc., and including inboard and outboard profile.

(b) *Hull structure.*[1] (1) *Inner bottom plating and framing.

(2) *Midship section.

(3) *Shell plating and framing.

(4) *Stem, stern frame, and rudder.

(5) *Structural deck plans for strength decks.

(6) *Pillars and girders.

(7) *Watertight and oiltight bulkheads.

(8) *Foundations for main machinery and boilers.

(9) *Arrangement of ports, doors, and airports in shell plating.

[1] The asterisk (*) indicates items which may require approval by the American Bureau of Shipping for vessels classed by that society.

(10) *Hatch coamings and covers in weather and watertight decks.

(11) *Details of watertight doors and operating gear.

(12) *Scuppers and drains penetrating shell plating.

(13) Weight handling gear.

(14) Fixed independent tanks containing flammable or combustible liquids in bulk.

(15) Special arrangements for scientific equipment, if any.

(c) *Hull calculations, etc.* Required only when a stability test is to be performed.

(1) Lines (for information).

(2) Curves of form.

(3) Capacity plan showing capacities and vertical and longitudinal centers of gravity of cargo spaces, tanks, etc. (for information).

(4) Tank sounding tables (for information).

(5) Draft mark locations (for information).

(6) Scientific equipment, if any.

(d) *Fire control.* (1)* General arrangement plans showing for each deck the control stations, the various fire sections enclosed by fire resisting bulkheads, the arrangement of the alarm and extinguishing systems, the fire extinguishers, means of access to different compartments and decks and the ventilation system including location of ventilation shutdowns, positions of dampers and the number identifying each system.

(2) Ventilation diagram including dampers and other fire control features.

(3) Details of alarm systems.

(4) Details of extinguishing systems, including fire mains, carbon dioxide, foam and sprinkling systems.

(e) *Marine engineering.* For plans required for marine engineering equipment and systems, see Subchapter F (Marine Engineering) of this chapter.

(f) *Electrical engineering.* For plans required for electrical engineering, equipment, and systems, see Subchapter J (Electrical Engineering) of this chapter.

(g) *Lifesaving equipment.* These plans are to show the location and arrangement of embarkation decks, all overboard discharges and projections in way of launching lifeboats, weights of lifeboats fully equipped and loaded, working loads of davits and winches, types and sizes of falls, the manufacturer's name and identification for all equipment, and all other relevant and necessary information.

(1) Arrangement of lifeboats.

(2) Arrangement of davits.

(3) Location and stowage of liferafts and buoyant apparatus.

(h) *Accommodations for crewmembers and scientific personnel.* Arrangement plans showing accommodations, ventilation, escapes, hospitals, and sanitary facilities for all crewmembers and scientific personnel.

(i) *Magazines and magazine vans.* (1) All plans relating to the arrangement, construction, ventilation, and fire protection system for magazines and magazine vans. (The plans required for magazines and magazine vans to be installed or carried on a vessel after the vessel is in operation, are set forth in Subpart 195.11 of this subchapter.)

(2) Ventilation and sprinkler system calculations for magazines and magazine vans.

(j) *Scientific equipment.* Plans of scientific equipment to show location, estimated weight, and arrangements when on board the vessel. With estimated weights, the manufacturer's specifications, purchase specifications, or the vendor's information may be accepted as sufficiently definitive on materials, design (safety) factors, and operating limitations.

§ 189.55–10 Plans required for alterations of existing vessels.

(a) In the event of alterations involving the safety of the vessel, the applicable plans shall be submitted for approval covering the proposed work except as modified by § 189.45–1. The general scope of the plans shall be as noted in § 189.55–5.

§ 189.55–15 Procedure for submittal of plans.

(a) As the relative location of shipyards, design offices, and Coast Guard offices vary throughout the country, no specific routing will be required in the submittal of plans. In general, one of the following procedures would apply, but in a particular case, if a more expeditious procedure can be used, there will be no objection to its adoption.

(1) The plans may be submitted to the Officer in Charge, Marine Inspection, in the district in which the vessel is to be built. This procedure will be most expeditious in the case of those offices where personnel and facilities are available for examination and approval of plans locally.

(2) The plans may be submitted directly to the Commandant (MMT), U.S. Coast Guard, 1300 E Street NW., Washington, D.C. 20226. In this case, the plans will be returned directly to the submitter, with a copy of the action being forwarded to the interested Officer in Charge, Marine Inspection.

(3) The plans may be submitted directly to field technical offices.

(i) Commander, 3d Coast Guard District (mmt), Governors Island, New York, N.Y. 10004, for the geographical area covered by 1st, 3d, and 5th Coast Guard Districts.

(ii) Commander, 8th Coast Guard District (mmt), Room 308, Customhouse, New Orleans, La., for geographical area covered by 2d, 7th, and 8th Coast Guard Districts.

(iii) Commander, 9th Coast Guard District (mmt), Main Post Office Building, West Third and Prospect Streets, Cleveland, Ohio 44113, for geographical area covered by 9th Coast Guard District.

(iv) Commander, 12th Coast Guard District (mmt), 630 Sansome Streets, San Francisco, Calif., for geographical area covered by 11th, 12th, 13th, 14th, and 17th Coast Guard Districts.

(4) In the case of classed vessels, upon specific request by the submitter, the American Bureau of Shipping will arrange to forward the necessary plans to the Coast Guard indicating its action thereon. In this case, the plans will be returned as noted in subparagraph (2) of this paragraph.

§ 189.55–20 Number of plans required.

(a) Four copies of each plan are normaly required so that one can be returned to the submitter. If the submitter desires additional approved plans, a suitable number should be submitted to permit the required distribution.

Subpart 189.60—Certificates Under International Convention for Safety of Life at Sea, 1960

§ 189.60–1 Application.

(a) The provisions of this subpart, with the exception of §§ 189.60–30 and 189.60–40(e), shall apply to all oceanographic vessels on an international voyage other than nuclear vessels. (See § 188.05–10 of this subchapter.)

(b) The provisions of §§ 189.60–30, 189.60–35, and 189.60–40(e) shall apply to all nuclear oceanographic vessels on an international voyage.

§ 189.60–5 Cargo Ship Safety Construction Certificate.

(a) All vessels on an international voyage are required to have a Cargo Ship Safety Construction Certificate. This certificate shall be issued by the U.S. Coast Guard or the American Bureau of Shipping to certain vessels on behalf of the United States of America as provided in Regulation 12, Chapter I, of the International Convention for Safety of Life at Sea, 1960.

(b) All such vessels shall meet the applicable requirements of this chapter for vessels on an international voyage.

§ 189.60–10 Cargo Ship Safety Equipment Certificate.

(a) All vessels on an international voyage are required to have a Cargo Ship Safety Equipment Certificate.

(b) All such vessels shall meet the applicable requirements of this chapter for vessels on an international voyage.

§ 189.60–15 Cargo Ship Safety Radiotelegraphy Certificate.

(a) The application for Cargo Ship Safety Radiotelegraphy Certificate is made on FCC Form 801 to the local office of the Federal Communications Commission.

(b) Where applicable, a Cargo Ship Safety Radiotelegraphy Certificate will be issued by the Federal Communications Commission to a vessel meeting its requirements for a vessel fitted with a radiotelegraph installation.

§ 189.60–20 Cargo Ship Safety Radiotelephony Certificate.

(a) The application for a Cargo Ship Safety Radiotelephony Certificate is made on FCC Form 801 to the local office of the Federal Communications Commission.

(b) Where applicable, a Cargo Ship Safety Radiotelephony Certificate will be

issued by the Federal Communications Commission to a vessel meeting its applicable requirements for a vessel fitted with a radiotelephone installation.

§ 189.60–25 Exemption Certificate.

(a) A vessel may be exempted by the Commandant from complying with certain requirements of the Convention under his administration upon request made in writing to him and transmitted via the Officer in Charge, Marine Inspection.

(b) When an exemption is granted to a vessel by the Commandant under and in accordance with the Convention, an Exemption Certificate describing such exemption shall be issued through the appropriate Officer in Charge, Marine Inspection, in addition to other required certificates.

§ 189.60–30 Nuclear Cargo Ship Safety Certificate.

(a) All nuclear cargo vessels on an international voyage are required to have a Nuclear Cargo Ship Safety Certificate.

(b) All such vessels shall meet the applicable requirements of this chapter for nuclear vessels on an international voyage.

(c) Nuclear vessels cannot be exempted from any requirements of the Convention.

§ 189.60–35 Posting of Convention certificates.

(a) The certificates described in this subpart, or certified copies thereof, when issued to a vessel shall be posted in a prominent and accessible place on the vessel.

(b) The certificates shall be carried in a manner similar to that described in § 189.01–5 for a certificate of inspection.

§ 189.60–40 Duration of certificates.

(a) A Cargo Ship Safety Equipment Certificate shall be issued for a period of not more than 24 months.

(b) A Cargo Ship Safety Construction Certificate shall be issued for a period of not more than 60 months.

(c) A Cargo Ship Safety Radiotelegraphy Certificate and a Cargo Ship Safety Radiotelephony Certificate shall be issued for a period of not more than 12 months.

(d) An Exemption Certificate shall not be valid for longer than the period of the certificate to which it refers.

(e) The Nuclear Cargo Ship Safety Certificate shall be issued for a period of not more than 12 months.

(f) A Convention Certificate may be withdrawn, revoked, or suspended at any time when it is determined the vessel is no longer in compliance with applicable requirements. (See § 2.01–70 of this chapter for procedures governing appeals.)

§ 189.60–45 American Bureau of Shipping.

(a) The American Bureau of Shipping, with its home office at 45 Broad Street, New York, N.Y. 10004, is hereby designated as an organization duly authorized to issue the "Cargo Ship Safety Construction Certificate" to certain oceanographic vessels on behalf of the United States of America as provided in Regulation 12, Chapter I, of the International Convention for Safety of Life at Sea, 1960, and Executive Order 11239 and the certificate shall be subject to the requirements in this subpart. The American Bureau of Shipping is authorized to place the official seal of the United States of America on the certificate. This designation and delegation to the American Bureau of Shipping shall be in effect from March 1, 1967, until terminated by proper authority and notice of cancellation is published in the FEDERAL REGISTER.

(b) At the option of the owner or agent of a vessel on an international voyage and on direct application to the American Bureau of Shipping, the Bureau may issue to such vessel a Cargo Ship Safety Construction Certificate, having a period of validity of not more than 60 months after ascertaining that the vessel:

(1) Has met the applicable requirements of the Convention; and

(2) Is currently classed by the Bureau and classification requirements have been dealt with to the satisfaction of the Bureau.

(c) When the Bureau determines that a vessel to which it has issued a Cargo Ship Safety Construction Certificate no longer complies with the Bureau's applicable requirements for classification, the Bureau shall immediately furnish to the Coast Guard all relevant information, which will be used by the Coast Guard to determine whether or not to withdraw, revoke or suspend the Cargo Ship Safety Construction Certificate.

(Sec. 25, 41 Stat. 998, as amended, sec. 701, 62 Stat. 731, as amended; 46 U.S.C. 881, 18 U.S.C. 701)

PART 190—CONSTRUCTION AND ARRANGEMENT

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190.25–10 Storm rails.
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190.25–90 Vessels contracted for prior to March 1, 1967.

AUTHORITY: The provisions of this Part 190 issued under R.S. 4405, as amended, 4462, as amended, sec. 5, 79 Stat. 424; 46 U.S.C. 375, 416, 445. Interpret or apply R.S. 4417, as amended, 4418, as amended, 4488, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended; 46 U.S.C. 391, 392, 481, 395, 363, 367. Treasury Dept. Orders 120, July 31, 1950, 15 F.R. 6521; CGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–66, Sept. 8, 1965, 30 F.R. 11735; unless otherwise noted.

Subpart 190.01—Hull Structure

§ 190.01–1 Application.

(a) The provisions of this subpart, with the exception of § 190.01–90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 190.01–90.

§ 190.01–5 Vessels subject to load line.

(a) For vessels assigned a load line, see Subchapter E (Load Lines) of this chapter for special requirements as to strength, closure of openings, etc.

(Sec. 2, 45 Stat. 1493, as amended, sec. 2, 49 Stat. 888, as amended; 46 U.S.C. 85a, 88a. Treasury Dept. Order 167–48, Oct. 19, 1962, 27 F.R. 10504)

§ 190.01–10 Structural standards.

(a) In general, compliance with the standards established by the American

Bureau of Shipping, see Subpart 188.35 of this subchapter, will be considered as satisfactory evidence of the structural efficiency of the vessel. However, in special cases, a detailed analysis of the entire structure or some integral part may be made by the Coast Guard to determine the structural requirements.

§ 190.01–13 Sliding watertight doors.

(a) Sliding watertight doors, where fitted, shall be designed, tested, and installed in accordance with Subpart 163.001 of Subchapter Q (Specifications) of this chapter.

§ 190.01–15 Special consideration.

(a) Special consideration will be given to the structural requirements for small vessels or vessels of an unusual design not contemplated by the rules of the American Bureau of Shipping.

§ 190.01–90 Vessels contracted for prior to March 1, 1967.

(a) Existing structure previously approved will be considered satisfactory so long as it is maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original construction.

(b) Conversions, major alterations, new installations, and replacements, shall meet the applicable specifications in this subpart for new vessels.

Subpart 190.05—General Fire Protection

§ 190.05–1 Application.

(a) The provisions of this subpart shall apply to all vessels, except as noted otherwise in this subpart.

§ 190.05–3 Fire hazards to be minimized.

(a) The general construction of the vessel shall be such as to minimize fire hazards.

§ 190.05–5 Woodwork insulated from heated surfaces.

(a) Internal combustion engine exhausts, boiler, and galley uptakes, and similar sources of ignition shall be kept clear of and suitably insulated from any woodwork or other combustible matter.

§ 190.05–10 Chemical storeroom and lamp room construction.

(a) Chemical storerooms, lamp, paint, and oil lockers and similar compartments shall be constructed of steel or shall be wholly lined with metal.

§ 190.05–15 Segregation of spaces containing the emergency source of electric power.

(a) When a compartment containing the emergency source of electric power, or vital components thereof, adjoins a space containing either the ship's service generators or machinery necessary for the operation of the ship's service generators, all common bulkheads and/or decks shall be protected by approved "structural insulation" or other approved material. This protection shall be such as to be capable of preventing an excessive temperature rise in the space containing the emergency source of electric power, or vital components thereof, for a period of at least 1 hour in the event of fire in the adjoining space. Bulkheads or decks meeting Class A–60 requirements, as defined by § 72.05–10 of Subchapter H (Passenger Vessels) of this chapter, will be considered as meeting the requirements of this paragraph.

§ 190.05–20 Segregation of chemical laboratories, scientific laboratories, and chemical storerooms.

(a) The provisions of this section shall apply to all vessels contracted for on or after March 1, 1967.

(b) The chemical laboratories, scientific laboratories, and chemical storerooms shall not be located in horizontal proximity to nor below accommodation or safety areas.

(c) The chemical laboratories and chemical storerooms shall not be located adjacent to the collision bulkhead, nor boundary divisions of the boilerroom, engineroom, galley or other high fire hazard area.

Subpart 190.07—Structural Fire Protection

§ 190.07–1 Application.

(a) The provisions of this subpart, with the exception of § 190.07–90, shall apply to all vessels which carry not more than 150 persons and are contracted for on or after March 1, 1967. Such vessels contracted for prior to March 1, 1967, shall meet the requirements of § 190.07–90.

(b) Those vessels which carry more than 150 persons shall meet the requirements in §§ 72.05–5 through 72.05–60 of Subchapter H (Passenger Vessels) of this chapter.

§ 190.07–5 Definitions.

(a) *Standard fire tests.* A "standard fire test" is one which develops in the test furnace a series of time temperature relationships as follows:

5 minutes—1,000° F.
10 minutes—1,300° F.
30 minutes—1,550° F.
60 minutes—1,700° F.

(b) *"A" Class divisions.* Bulkheads or decks of the "A" Class shall be composed of steel or equivalent metal construction, suitably stiffened and made intact with the main structure of the vessel; such as shell, structural bulkheads, and decks. They shall be so constructed, that if subjected to the standard fire test, they would be capable of preventing the passage of flame and smoke for 1 hour.

(c) *"B" Class bulkheads.* Bulkheads of the "B" Class shall be constructed with approved incombustible materials and made intact from deck to deck and to shell or other boundaries. They shall be so constructed that, if subjected to the standard fire test, they would be capable of preventing the passage of flame and smoke for one-half hour.

(d) *"C" Class divisions.* Bulkheads or decks of the "C" Class shall be constructed of approved incombustible materials, but need meet no requirements relative to the passage of flame.

(e) *Steel or other equivalent metal.* Where the term "steel or other equivalent metal" is used in this subpart, it is intended to require a material which, by itself or due to insulation provided, has structural and integrity qualities equivalent to steel at the end of the applicable fire exposure.

(f) *Approved material.* Where in this subpart approved materials are required, they refer to materials approved under the applicable subparts of Subchapter Q (Specifications) of this chapter, as follows:

Deck coverings	164.006
Structural insulation	164.007
Bulkhead panels	164.008
Incombustible materials	164.009
Interior finish	164.012

§ 190.07–10 Construction.

(a) The hull, superstructure, structural bulkheads, decks, and deckhouses shall be constructed of steel. Alternately, the Commandant may permit the use of other suitable material in special cases, having in mind the risk of fire.

(b) Bulkheads of chemistry laboratories, chemical storerooms, galleys, paint and lamp lockers, and emergency generator rooms shall be of "A" Class construction.

(c) The boundary bulkheads and decks separating the accommodations and control stations from hold and machinery spaces, galleys, main pantries, laboratories, and storerooms, other than small service lockers, shall be of "A" Class construction.

(d) Within the accommodation and service areas the following conditions shall apply:

(1) Corridor bulkheads in accommodation spaces shall be of the "A" or "B" Class intact from deck to deck. Stateroom doors in such bulkheads may have a louver in the lower half.

(2) Elevator, dumbwaiter, stairtower, and other trunks shall be of "A" Class construction.

(3) Bulkheads not already specified to be of "A" or "B" Class construction may be of "A", "B", or "C" Class construction.

(4) The integrity of any deck in way of a stairway opening shall be maintained by means of "A" or "B" Class bulkheads and doors at one level. The doors shall be of self-closing type. Holdback hooks will not be permitted. However, magnetic holdbacks operated from the bridge or from other suitable remote control positions are acceptable.

(5) Interior stairs, including stringers and treads, shall be of steel.

(6) Except for washrooms and toilet spaces, deck coverings within accommodation spaces shall be of an approved type. However, overlays for leveling or finishing purposes which do not meet the requirements for an approved deck covering may be used in thicknesses not exceeding three-eighths of an inch.

(7) Ceilings, linings, and insulation, including pipe and duct laggings, shall be approved incombustible materials.

(8) Any sheathing, furring, or holding pieces incidental to the securing of

any bulkhead, ceiling, lining, or insulation shall be of approved incombustible materials.

(9) Bulkheads, linings, and ceiling may have a combustible veneer within a room not to exceed two twenty-eighths of an inch in thickness. However, combustible veneers, trim, decorations, etc., shall not be used in corridors or hidden spaces. This is not intended to preclude the use of an approved interior finish or a reasonable number of coats of paint.

(e) Nitrocellulose or other highly flammable or noxious fume-producing paints or lacquers shall not be used.

§ 190.07–90 Vessels contracted for prior to March 1, 1967.

(a) Existing structure arrangements and materials previously approved will be considered satisfactory so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original construction.

(b) Conversions, major alterations, new installations, and replacements shall comply with the applicable specifications and requirements in this subpart for new vessels.

Subpart 190.10—Means of Escape

§ 190.10–1 Application.

(a) The provisions of this subpart, with the exception of § 190.10–90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 190.10–90.

§ 190.10–5 Two means required.

(a) There shall be at least two means of escape from all general areas where the crew or scientific personnel may be quartered or normally employed. At least one of these two means of escape shall be independent of watertight doors and hatches, except for quick acting watertight doors giving final access to weather decks.

§ 190.10–10 Location.

(a) The two means of escape shall be as remote as practicable so as to minimize the possibility of one incident blocking both escapes.

§ 190.10–15 Vertical ladders not accepted.

(a) Vertical ladders and deck scuttles shall not in general be considered satisfactory as one of the required means of escape. However, where it is demonstrated that the installation of a stairway would be impracticable, a vertical ladder may be used as the second means of escape.

§ 190.10–20 No means for locking doors.

(a) No means shall be provided for locking doors giving access to either of the two required means of escape except that crash doors or locking devices, capable of being easily forced in an emergency, may be employed provided a permanent and conspicuous notice to this effect is attached to both sides of the door. This paragraph shall not apply to outside doors to deckhouses where such doors are locked by key only and such key is under the control of one of the vessel's officers.

§ 190.10–25 Stairway size.

(a) Stairways shall be of sufficient width having in mind the number of persons having access to such stairs for escape purposes.

(b) All interior stairways, other than those within the machinery spaces, shall have minimum width of 28 inches. The angle of inclination with the horizontal of such stairways shall not exceed 50°.

(c) Special consideration for relief may be given if it is shown to be unreasonable or impracticable to meet the requirements in this section.

§ 190.10–30 Dead end corridors.

(a) Dead end corridors, or the equivalent, more than 40 feet in length shall not be permitted.

§ 190.10–35 Public spaces.

(a) In all cases, public spaces having a deck area of over 300 square feet shall have at least two exits. Where practicable, these exits shall give egress to different corridors, rooms, or spaces to minimize the possibility of one incident blocking both exits.

§ 190.10–40 Access to lifeboats.

(a) The stairways, corridors, and doors shall be so arranged as to permit a ready and direct access to the various lifeboat and liferaft embarkation areas.

§ 190.10–45 Weather deck communications.

(a) Vertical communication shall be provided between the various weather decks by means of permanent inclined ladders.

§ 190.10–90 Vessels contracted for prior to March 1, 1967.

(a) Existing arrangements previously approved will be considered satisfactory so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original design: *Provided*, That in no case will a greater departure from the standards of §§ 190.10–5 through 190.10–45 be permitted than presently exists. Nothing in this paragraph shall be construed as exempting any vessel from having two means of escape from all main compartments where persons on board may be quartered or normally employed.

Subpart 190.15—Ventilation

§ 190.15–1 Application.

(a) The provisions of this subpart, with the exception of § 190.15–90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 190.15–90.

§ 190.15–5 Vessels using fuel having a flashpoint of 110° F. or lower.

(a) Spaces containing machinery which uses, or tanks which contain, fuel having a flashpoint of 110° F. or lower shall have natural supply and mechanical exhaust ventilation as required by this section.

(b) The mechanical exhaust system shall be such as to assure the air changes as noted in Table 190.15–5(b) depending on the size of the space.

TABLE 190.15–5(b)

Size of space, cubic feet		Minute per air change
Over	Not over	
.....	500	2
500	1000	3
1000	1500	4
1500	.....	5

(c) Exhaust blower motors, unless of a totally enclosed, explosion-proof type, shall be located outside of the ducts and outside of the compartment required to be ventilated. Exhaust blower motors if mounted in any compartment shall be located as high above the bilge as practicable. Blower blades shall be nonsparking with reference to their housings.

(d) Exhaust blower switches shall be located outside of any space required to be ventilated by this section, and shall be of the type interlocked with the ignition switch so that the blowers are started before the engine ignition is switched on. A red warning sign at the switch shall state that the blowers shall be operated prior to starting the engines for a sufficient time to insure at least one complete change of air in the compartments.

(e) The area of the ducts shall be such as to limit the air velocity to a maximum of 2,000 feet per minute. Ducts may be of any shape: *Provided*, That in no case shall one cross section dimension exceed twice the other.

(f) At least two inlet ducts shall be located at one end of the compartment and they shall extend to the lowest part of the compartment or bilge on each side. Similar exhaust ducts shall be led to the mechanical exhaust system from the lowest part of the compartment or bilge on each side of the compartment at the end opposite from that at which the inlet ducts are fitted. These ducts shall be so installed that ordinary collection of water in the bilge will not close off the ducts.

(g) All ducts shall be of rigid permanent construction of fireproof material and reasonably gastight from end to end. The ducts shall lead as direct as possible and be properly fastened and supported.

(h) All supply ducts shall be provided with cowls or scoops having a free area not less than twice the required duct area. When the cowls or scoops are screened, the mouth area shall be increased to compensate for the area of the screen wire. Dampers shall not be fitted in the supply ducts. Cowls or

scoops shall be kept open at all times except when the stress of weather is such as to endanger the vessel if the openings are not temporarily closed. Supply and exhaust openings shall not be located where the natural flow of air is unduly obstructed, or adjacent to possible sources of vapor ignition, nor shall they be so located that exhaust air may be taken into the supply vents.

(i) Provision shall be made for closing all cowls or scoops when the fixed carbon dioxide system is operated.

§ 190.15–10 Ventilation for closed spaces.

(a) All enclosed spaces within the vessel shall be properly vented or ventilated. Means shall be provided to close off all vents and ventilators.

(b) Means shall be provided for stopping all fans in ventilation systems serving the chemical laboratories, scientific laboratories, chemical storerooms, and machinery spaces and for closing all doorways, ventilators, and annular spaces around funnels and other openings to such spaces, from outside these spaces, in case of fire.

(c) See §§ 194.15–5 and 194.20–5 of this subchapter for ventilation of chemical laboratories, scientific laboratories, and storerooms.

§ 190.15–15 Ventilation for living spaces and quarters.

(a) All living spaces shall be adequately ventilated in a manner suitable to the purpose of the space.

(b) All spaces used as quarters for crewmembers and scientific personnel shall be ventilated by a mechanical system unless it can be shown that a natural system will provide adequate ventilation. By a natural system is meant those spaces so located that the windows, ports, skylights, etc., and doors to passageways can be kept open and thereby provide adequate ventilation under all ordinary conditions of weather.

§ 190.15–90 Vessels contracted for prior to March 1, 1967.

(a) Existing arrangements previously approved will be considered satisfactory so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original design: *Provided*, That in no case will a greater departure from the standards of §§ 190.15–5 through 190.15–15 be permitted than presently exists.

Subpart 190.20—Accommodations for Officers, Crew, and Scientific Personnel

§ 190.20–1 Application.

(a) The provisions of this subpart, with the exception of § 190.20–90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 190.20–90.

§ 190.20–5 Intent.

(a) It is the intent of this subpart that the accommodations provided for officers, crew, and scientific personnel on all vessels shall be securely constructed, properly lighted, heated, drained, ventilated, equipped, located, arranged, and, where practicable, shall be insulated from undue noise and free from effluvia.

(b) Provided the intent of this subpart is met, consideration may be given by the Officer in Charge, Marine Inspection, to relax the requirements relating to the size and separation of accommodations for scientific personnel.

(c) The crew referred to in this subpart includes all persons, except the licensed officers, regularly employed on board any vessel. Where the requirements for the accommodations of licensed officers and/or scientific personnel are not otherwise specified, they shall be at least equivalent to that indicated in this subpart for the crew.

§ 190.20–10 Location of crew spaces.

(a) Crew spaces shall be located, where practicable, so that the maximum amount of fresh air and light are obtainable, having due regard to the service of the vessel and the requirements of other space users.

(b) Crew quarters shall not be located farther forward in the vessel than a vertical plane located at 5 percent of the vessel's length abaft the forward side of the stem at the designed summer load water line. However, for vessels in other than ocean or coastwise service, this distance need not exceed 28 feet. For purpose of this paragraph the length shall be as defined in § 43.15–1 of Subchapter E (Load Lines) of this chapter. No section of the deck of the crew spaces shall be below the deepest load line, except that in special cases, the Commandant may approve such an arrangement: *Provided*, That in no case shall be deck head of crew spaces other than gymnasiums, exercise rooms, and libraries be below the deepest load line.

(c) Hawse pipes or chain pipes shall not pass through crew spaces.

(d) There shall be no direct communication, except through solid, close fitted doors or hatches between crew spaces and chain lockers, or machinery spaces.

(e) There shall be no access, vents, or sounding tubes from fuel oil tanks opening into crew spaces, except that sounding tubes and access openings may be located in corridors.

(f) Where practicable, crew spaces shall be located entirely separate and independent of spaces alloted to licensed officers.

§ 190.20–15 Construction.

(a) All crew spaces are to be constructed in a manner suitable to the purpose for which they are intended. The bulkheads separating the crew spaces from machinery spaces, lamp and paint rooms, storerooms, drying rooms, washrooms, and toilet spaces shall be made odor-proof where deemed necessary by the Commandant.

(b) Toilet spaces, except when provided as private or semiprivate facilities, shall be so built, fitted, and situated, that no odor from them will readily enter other crew spaces.

(c) Where shell or unsheated weather decks form boundaries of crew spaces, suitable protective coverings shall be applied to prevent formation or accumulation of moisture.

(d) Where crew spaces adjoin or are immediately above spaces such as galleys, machinery spaces or casings, donkey boilerrooms, etc., they shall be suitably protected from the heat.

(e) The interior sides and deck heads of crew spaces shall be covered with enamel, paint, or other material light in color.

(f) Crew spaces shall be properly drained where considered necessary.

(g) All washrooms and toilet rooms shall be properly drained and so constructed and arranged that they can be kept in a clean, workable, and sanitary condition. The scuppers shall be located in the lowest part of the space, due consideration being given to the average trim of the vessel.

§ 190.20–20 Sleeping accomodations.

(a) *Arrangements.* (1) Where practicable, separate sleeping accommodations are to be provided for the deck, engine, and steward groups of the crew.

(2) Where practicable, each licensed officer shall be provided with a separate stateroom.

(b) *Size.* (1) Sleeping accommodations for the crew shall be divided into rooms, no one of which shall berth more than four persons.

(2) Each room shall be of such size that there are at least 30 square feet of deck area and a volume of at least 210 cubic feet for each person accommodated. The clear head room shall be not less than 6 feet 3 inches. In measuring sleeping quarters allocated to crews of vessels, any equipment contained therein for the use of the occupants is not to be deducted from the total volume or from the deck area.

(3) Sleeping accommodations for scientific personnel shall be divided into rooms, no one of which shall berth more than six persons.

(4) Each room for scientific personnel shall be of such size that there are at least 20 square feet of deck area and a volume of at least 150 cubic feet for each person accommodated. The clear head room shall be not less than 6 feet 3 inches. In measuring sleeping accommodations any equipment contained therein for the use of the occupants is not to be deducted from the total volume or from the deck area.

(c) *Equipment.* (1) Each person shall have a separate berth and not more than one berth shall be placed above another. The berths shall have a framework of metal or other hard, smooth material not likely to corrode or harbor vermin, and shall be so arranged that they provide ample room for easy occupancy. The overall size of a berth shall not be less than 30 inches wide by

76 inches long, except by special permission of the Commandant. Where berths adjoin, they shall be divided by a partition not less than 18 inches in height. Where two tiers of berths are fitted, the bottom of the lower must not be less than 12 inches above the deck, and the bottom of the upper must not be less than 2 feet 6 inches both from the bottom of the lower and from the deck overhead. The berths shall not be obstructed by pipes, ventilating ducks, or other installations.

(2) A locker of metal or other hard, smooth material shall be provided for each person accommodated in a room. Each locker shall be not less than 300 square inches in cross section area and 60 inches high. It shall be so placed as to be readily accessible. The interior of the locker shall be so arranged as to facilitate the proper stowage of clothes.

§ 190.20–25 Washrooms and toilet rooms.

(a) There shall be provided at least one toilet, one washbasin, and one shower or bathtub for each eight members or portion thereof in the crew to be accommodated. The crew to be accommodated shall include all members who do not occupy rooms to which private or semiprivate facilities are attached.

(b) Under the following conditions, the toilet and washing facilities for the specific groups of the crew indicated shall be located in spaces separate from the facilities for other crewmembers; and shall be provided for that group in the ratios required by paragraph (a) of this section.

(1) The members of the engine department, where their number, exclusive of licensed officers and others separately provided for, exceeds eight.

(2) The members of the steward's department, exclusive of those separately provided for, where their number exceeds eight.

(3) All female members of the crew.

(c) The toilet rooms and washrooms shall be located convenient to the sleeping quarters of the crew to which they are allotted but shall not open directly into such quarters except when they are provided as private or semiprivate facilities.

(d) All washbasins, showers, and bathtubs shall be equipped with proper plumbing, including hot and cold running water. Washbasins may be located in the crew sleeping quarters.

(e) The toilet rooms shall be separate from the washrooms and at least one washbasin shall be fitted in each toilet room, except where private or semiprivate facilities are provided and washbasins are installed in the sleeping rooms.

(1) All toilets shall be installed with proper plumbing for flushing. Toilets shall be provided with seats of the open front type. Urinals may be fitted in toilet rooms, if desired, but no reduction in the required number of toilets will be made therefor.

(2) Where more than one toilet is located in a space or compartment, each toilet shall be separated by partitions, which shall be open at the top and bottom for ventilation and cleaning purposes.

§ 190.20–30 Messrooms.

(a) Messrooms shall be located as near to the galley or suitably equipped serving pantry, as is practicable except where messroom is equipped with a steam table. The messrooms shall be of such size as to seat the number of persons normally scheduled to be eating at one time.

(b) Messrooms shall be properly equipped with tables, seats, and other necessary equipment and shall be so arranged as to permit access to each seat.

§ 190.20–35 Hospital space.

(a) Each vessel, which in the ordinary course of its employment makes voyages of more than 3 days' duration between ports and which carries a crew of 12 or more, shall be provided with a hospital space. This space shall be situated with due regard to the comfort of the sick so that they may receive proper attention in all weathers.

(b) The hospital shall be suitably separated from other spaces and shall be used for the care of the sick and for no other purpose.

(c) The entrance shall be of such width and in such a position as to admit a stretcher case readily. Berths shall be of metal and may be in double tier, provided the upper berth is hinged and arranged to be secured clear of the lower berth when not in use. At least one berth shall be so arranged that it can be made accessible from both sides when necessary.

(d) The hospital shall be fitted with berths in the ratio of 1 berth to every 12 members of the crew or portion thereof who are not berthed in single occupancy rooms, but the number of berths need not exceed six. Where all single occupancy rooms are provided the requirement for a separate hospital room may be withdrawn: *Provided*, That one stateroom is fitted with a bunk accessible from both sides.

(e) The hospital shall have a toilet, washbasin and bathtub or shower conveniently situated. Other necessary suitable equipment of such character as clothes locker, table, seat, etc., shall be provided.

§ 190.20–40 Other spaces.

(a) Sufficient facilities, depending upon the number of the crew, shall be provided where the crew may wash their own clothes. There shall be at least one tub or sink, fitted with the necessary plumbing, including hot and cold running water.

(b) Clothes drying facilities or space shall be provided for the needs of the crew.

(c) Recreation accommodations shall be provided. Where messrooms are used for this purpose, they shall be suitably planned.

§ 190.20–45 Lighting.

(a) All crew spaces shall be adequately lighted in accordance with the requirements of Subchapter J (Electrical Engineering) of this chapter.

(b) Berth lights shall be provided for each member of the crew.

§ 190.20–50 Heating.

(a) All crew spaces shall be adequately heated in a manner suitable to the purpose of the space.

(b) The heating system will be considered satisfactory if it is capable of maintaining a minimum temperature of 70° F. under normal operating conditions without undue curtailment of the ventilation.

(c) Radiators and other heating apparatus shall be so placed, and where necessary shielded, as to avoid risk of fire, danger, or discomfort to the occupants. Pipes leading to radiators or heating apparatus shall be lagged where those pipes create a hazard to persons occupying the space.

§ 190.20–55 Insect screens.

(a) Except in such areas as are considered to be insect free, provision shall be made to protect the quarters for crew and scientific personnel against the admission of insects. This may be accomplished by the fitting of suitable screens to ventilating skylights, airports, ventilators, and doors to unscreened spaces and the open deck or by other methods. Insect screens are not required in air conditioned quarters nor for windows, airports, and doors that are normally kept closed.

§ 190.20–90 Vessels contracted for prior to March 1, 1967.

(a) Existing structures, arrangements, materials, and facilities previously approved will be considered satisfactory so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original construction: *Provided*, That in no case will a greater departure from the standards of §§ 190.20–5 through 190.20–55 be permitted than presently exists.

Subpart 190.25—Rails and Guards

§ 190.25–1 Application.

(a) The provisions of this subpart, with the exception of § 190.25–90, apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 190.25–90.

§ 190.25–5 Where rails required.

(a) Rails at least 36 inches high or equivalent protection shall be installed near the periphery of all weather decks accessible to persons on board. Such rails on decks which extend outboard to the side of the vessel shall be in at least three courses approximately evenly spaced. Such rails on decks which do not extend outboard to the side of the vessel, such as tops of deckhouses and winch houses, shall be in at least two courses approximately evenly spaced. If it can be shown to the satisfaction of the Officer in Charge, Marine Inspection, that the installation of rails of such height will be unreasonable and impracticable,

having regard to the business of the vessel, rails of a lesser height or in some cases grab rails may be accepted and inboard rails may be eliminated if the deck is not generally accessible.

§ 190.25–10 Storm rails.

(a) On vessels in ocean and coastwise service, suitable storm rails shall be installed in all passageways and at the deckhouse sides where persons on board might have normal access. Storm rails shall be installed on both sides of passageways which are 6 feet or more in width.

§ 190.25–15 Guards in dangerous places.

(a) Suitable hand covers, guards, or rails shall be installed in way of all exposed and dangerous places such as gears, machinery, etc.

§ 190.25–90 Vessels contracted for prior to March 1, 1967.

(a) Existing structures, arrangements, materials, and facilities previously approved will be considered satisfactory so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original construction: *Provided*, That in no case will a greater departure from the standards of §§ 190.25–5 through 190.25–15 be permitted than presently exists.

PART 191—SUBDIVISION AND STABILITY

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Subpart 191.90—Vessels Contracted for Prior to March 1, 1967

191.90–1 Requirements.
191.90–5 Stability information.
191.90–10 Stability letter.

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Subpart 191.01—Application

§ 191.01–1 General.

(a) The provisions of this part, with the exception of Subpart 191.90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of Subpart 191.90.

Subpart 191.05—Definitions

§ 191.05–1 Subdivision load line.

(a) A subdivision load line is a waterline used in determining the subdivision of the ship.

§ 191.05–2 Deepest subdivision load line.

(a) The deepest subdivision load line is the waterline which corresponds to the greatest draft permitted by the subdivision requirements which are applicable.

§ 191.05–3 Length of the vessel.

(a) The length of the vessel is the length measured between perpendiculars taken at the extremities of the deepest subdivision load line.

§ 191.05–4 Breadth of the vessel.

(a) The breadth of the vessel is the extreme width from outside of frame to outside of frame at or below the deepest subdivision load line. On wood vessels, measurements should be taken to outside of planking.

§ 191.05–5 Bulkhead deck.

(a) The bulkhead deck is the uppermost deck up to which the transverse watertight bulkheads are carried.

§ 191.05–6 Margin line.

(a) The margin line is a line drawn at least 3 inches below the upper surface of the bulkhead deck at side where the bulkhead deck is continuous; where the bulkhead deck is not continuous, an assumed continuous margin line shall be used which at no point is less than 3 inches below the top of the deck at side to which the bulkheads concerned and the shell are carried watertight.

(b) In the case of vessels with continuous bulkhead decks, where the average value of the sheer at bow and stern is less than 12 inches, a modified margin line 3 inches below the top of deck at the ends but lowered amidships to the position indicated in Table 191.05–6(b) is to be used.

TABLE 191.05–6(b)

Average value of sheer at bow and stern (inches)	*Required position of margin line below top of deck, at side amidships (inches)*
12	3
6	6
0	9

(1) Interpolation is required for intermediate values not shown in Table 191.05–6(b).

(2) The modified margin line shall be parabolic through the midship and end points indicated in this paragraph. Margin lines so determined are based upon the assumption that the bulkhead deck is continuous and has existing parabolic sheer. Where this is not the case, the margin line shall be such as to give at least a standard of safety equivalent to the standard described in this paragraph.

§ 191.05–7 Draft.

(a) The draft is the vertical distance from the molded base line amidships to the subdivision load line in question.

§ 191.05–8 Permeability.

(a) The permeability of a space is the percentage of that space which can be occupied by water.

Subpart 191.10—Rules for Subdivision

§ 191.10–1 Permeability.

(a) In making subdivision calculations, volumes shall be calculated to the margin line, and the permeability of spaces shall be taken as follows:

(1) Machinery spaces at 85 percent.

(2) Tanks, chain lockers, and spaces normally filled with cargo, stores, mail, or baggage in the full load condition at 60 percent.

(3) All other spaces at 95 percent.

§ 191.10–5 Compartmentation.

(a) All vessels shall be subdivided so as not to submerge the margin line with any one main compartment flooded.

§ 191.10–10 Minimum spacing of bulkheads.

(a) To be considered effective, watertight bulkheads abaft the collision bulkhead shall be spaced not less than 10 feet plus 3 percent of the load waterline length.

§ 191.10–13 Stepped and recessed bulkheads.

(a) Where a main transverse bulkhead is recessed or stepped, an equivalent plane bulkhead shall be used in determining the subdivision, and the same measure of safety shall be provided as would be provided by a plane bulkhead.

(b) In recessed bulkheads, the recess shall be inboard from the vessel's side by at least one-fifth the beam amidship measured at right angles to the centerline at the level of the load waterline.

§ 191.10–15 Collision bulkhead required.

(a) Every vessel shall have a collision bulkhead located not less than 5 percent, and not more than 10 feet plus 5 percent, of the length of the vessel from the forward perpendicular.

§ 191.10–16 Extent of double bottoms.

(a) A double bottom should be fitted extending from the forepeak bulkhead to the afterpeak bulkhead as far as is practicable and compatible with the design and proper working of the vessel.

(b) In vessels 165 feet and under 200 feet in length, a double bottom shall be fitted at least from the machinery space to the forepeak bulkhead, or as near thereto as practicable.

(c) In vessels 200 feet and under 249 feet in length, a double bottom shall be fitted at least outside the machinery space, and shall extend to the fore and afterpeak bulkheads, or as near thereto as practicable.

(d) In vessels 249 feet in length and upwards, a double bottom shall be fitted amidships and shall extend to the fore and afterpeak bulkheads, or as near thereto as practicable.

(e) Where a double bottom is required to be fitted, its depth shall be sufficient to provide acceptable protection against grounding. A depth in inches at the centerline of $18+\frac{L}{20}$, where L is the vessel's length in feet will ordinarily be considered acceptable. The inner bottom shall be continued out to the ship's side in such a manner as to protect the bottom to the turn of the bilge. Such protection will be deemed satisfactory if the line of intersection of the outer edge of the margin plate with the bilge plating is not lower at any part than a horizontal plane passing through the point of intersection with the frame line amidships of a transverse diagonal line inclined at 25 degrees to the base line and cutting it at a point one-half the ship's molded breadth from the middle line.

(f) A double bottom need not be fitted in way of watertight compartments of moderate size used exclusively for the carriage of liquids, provided the safety of the ship, in the event of bottom or side damage, is not, in the opinion of the Commandant, thereby impaired.

§ 191.10–17 Wells in double bottoms.

(a) Small wells constructed in the double bottom in connection with drainage arrangements of holds, etc., shall not extend downward more than necessary. The depth of the well shall in no case be more than the depth less 18 inches of the double bottom at the centerline, nor shall the well extend below the horizontal plane referred to in § 191.10–16(e).

(b) A well extending to the outer bottom is, however, permitted at the after end of the shaft tunnel of screw vessels. Other wells, such as for lubricating oil under main engines, may be permitted by the Commandant, if satisfied that the arrangements give protection equivalent to that afforded by a double bottom complying with this section.

§ 191.10–18 Manholes in double bottoms.

(a) The number of manholes in the inner bottom shall be reduced to the minimum compatible with the design and necessity for access to the double bottom.

(b) Efficient covers, capable of being made thoroughly watertight and effectively protected from damage by stores, shall be fitted to the manholes.

§ 191.10–19 Watertight floors in double bottoms.

(a) Watertight transverse divisions should be fitted in the double bottom under each main watertight subdivision bulkhead or as near thereto as practicable. Where duct keels are fitted, the transverse divisions need not extend across the duct keel.

§ 191.10–20 Penetrations and openings in watertight bulkheads.

(a) *General.* The number of openings in watertight bulkheads shall be reduced to the minimum compatible with the design and proper working of the vessel; satisfactory means shall be provided for closing these openings. Lead or other heat sensitive materials shall not be used in systems which penetrate watertight subdivision bulkheads, where deterioration of such systems in the event of fire would impair the watertight integrity of the bulkheads.

(b) *Pipes, cables, etc.* (1) Where pipes, scuppers, electric light cables, etc., are carried through watertight subdivision bulkheads, arrangements shall be made to insure the integrity of the watertightness of the bulkheads.

(2) The collision bulkhead below the margin line shall not be pierced by more than one pipe conveying liquids to and from the forepeak tank. Such pipe shall be fitted with a screwdown valve operable from above the bulkhead deck and the valve shall be secured to the bulkhead fitted inside the forepeak tank.

(c) *Valves and cocks.* Valves and cocks not forming part of a piping system shall not be permitted in watertight subdivision bulkheads.

(d) *Ventilation ducts.* (1) Ventilation or forced draft ducts which penetrate watertight bulkheads shall be held to a minimum.

(2) Watertight penetrations may be allowed if the bottom of the duct is not more than 18 inches below the bulkhead deck, and the duct is as near the centerline as possible; and then only if the bottom of the duct is at least 4 feet above the deepest level of flooding water shown by the damaged condition waterlines.

(e) *Prohibited locations for access openings.* No doors, manholes, or access openings are permitted in the collision bulkhead below the margin line.

(f) *Openings above the margin line.* (1) Where a portion of an assumed margin line is appreciably below the deck to which bulkheads are carried, and it can be shown that the maintenance of complete watertightness will result in undue hardship in the arrangement of the vessel, a limited amount of nontight bulkhead penetrations may be permitted as high as possible immediately under the bulkhead deck. Such penetrations shall be subject to specific approval in each instance and will generally be limited as follows:

(i) Not more than 2 feet below the molded line of the bulkhead deck.

(ii) Not less than 9 inches above the margin line.

(iii) Not outboard of vertical lines located off the centerline at a distance of one-fourth of the full breadth of the ship measured on the bulkhead deck at the point in question.

(2) Approved nontight bulkhead penetrations shall be indicated on a suitable plan carried aboard the vessel.

(g) *Trunkways or tunnels.* (1) Where trunkways or tunnels are carried through main transverse watertight bulkheads, they shall be watertight and in accordance with structural requirements for watertight bulkheads. The access to at least one end of each such tunnel or trunkway, if used as a passage at sea, shall be through a trunk extending watertight to a height sufficient to permit access above the margin line. The access to the other end of the trunkway or tunnel may be through a watertight door of the type required by its location in the ship. Such trunkways or tunnels shall not extend through the first subdivision bulkhead abaft the collision bulkhead.

(2) A short tunnel extending through not more than one main subdivision compartment and which is closed at one end need not be fitted with a door at the other end, provided its sides are not nearer the shell than is permitted for the sides of a recess in a bulkhead as stated in 191.10–13(b), and for damaged stability the volume of the tunnel is included in the volume of the compartment into which it opens.

§ 191.10–25 Watertight bulkhead doors.

(a) *General.* Watertight door openings shall be located as high in the bulkhead and as far inboard as practicable. The number of watertight doors shall be reduced to the minimum consistent with the design and proper working of the vessel.

(b) *Types and classes.* (1) The only types of watertight doors permissible are hinged doors, sliding doors, and doors of other equivalent patterns, excluding plate doors secured only by bolts and doors required to be closed by dropping or by the action of a dropping weight. Sliding doors may have horizontal or vertical motion. The permissible classes of doors are:

Class 1—Hinged doors.
Class 2—Sliding doors, operated by hand gear only.
Class 3—Sliding doors, operated by power and by hand gear.

(2) Hinged doors shall be quick acting, dog on frame type, with dogs spaced and designed to insure that the opening may be closed thoroughly watertight from either side of the bulkhead.

(c) *Class 1 doors, permissible locations.* Class 1 doors are only permitted above a deck the molded line of which, at its lowest point at side, is at least 7 feet above the deepest subdivision load line.

(d) *Class 2 doors, permissible locations.* (1) Watertight doors, the sills of which are above the deepest subdivision load line and below the line specified in paragraph (c) of this section shall be Class 2.

(2) When the number of watertight doors which may be sometimes opened at sea, and whose sills are below the deepest subdivision load line (excluding doors at entrance to shaft tunnels) does not exceed five, these watertight doors and the shaft tunnel doors shall be Class 2.

(e) *Class 3 doors required locations.* When the number of watertight doors which may be sometimes opened at sea, and whose sills are below the deepest subdivision load line (excluding doors at entrance to shaft tunnels) exceed five, all of these doors and those at the entrance to shaft tunnels shall be Class 3, and shall be capable of being simultaneously closed from a central station situated on the bridge.

(f) *Design, installation, and tests.* (1) The design of all watertight doors shall be subject to approval by the Commandant.

(2) Each Class 1 door installed on a vessel in ocean or coastwise service shall be tested by water pressure to a head up to the margin line, but in no case less than 10 feet. Such doors on vessels in other services shall be tested in the same manner as the bulkhead in which they are fitted.

(3) Each Class 2 and Class 3 door shall be designed, tested, and installed in accordance with Subpart 163.001 of Subchapter Q (Specifications) of this chapter.

(g) *Relaxation of requirements.* The Commandant may allow a relaxation of the requirements of this section in exceptional cases where it is shown to be unreasonable or impracticable to meet the requirements.

§ 191.10–30 Openings in vessel's sides below the bulkhead deck.

(a) *General.* (1) The number of openings in vessel's sides below the bulkhead deck shall be reduced to the minimum compatible with the proper design and working of the vessel.

(2) The arrangement and efficiency of the means for closing each opening shall be consistent with its intended purpose and the position in which it is fitted, and shall be to the satisfaction of the Commandant.

(b) *Port lights.* (1) If, a 'tween deck, the sills of any port lights are below a line drawn parallel to the molded line of the bulkhead deck at side and having its lowest point 2½ percent of the breadth of the vessel above the deepest subdivision load line, all port lights in that 'tween deck shall be of a nonopening type.

(2) All port lights, the sills of which are below the bulkhead deck, other than those required to be of a nonopening type shall be of such construction as will effectively prevent any person opening them without the consent of the master of the vessel.

(3) No port lights shall be fitted in spaces which are appropriated exclusively to the carriage of stores.

(4) Design of port lights below the bulkhead deck as follows:

(i) All port lights are to be of substantial construction subject to approval of the Commandant.

(ii) Nonopening port lights are to be thoroughly watertight and port lights which are capable of being opened shall be so constructed that they can be easily and effectively closed and secured watertight. Port lights capable of being opened shall have fitted to one or more of the bolts a special round slotted or recessed nut requiring a special wrench. The special nuts are to be protected by sleeves or guards so as to render them incapable of being released by the use of ordinary tools, such as pipe wrenches, etc.

(c) *Deadlights.* (1) Port lights to space below the freeboard deck, as defined in Subchapter E (Load Lines) of this chapter, or to spaces within enclosed superstructure shall be fitted with hinged deadlight covers.

(2) Dead covers shall be of efficient design and arranged so that they can be easily and effectively secured watertight. Where fitted to opening-type port lights, they shall be of such design that it will not be necessary to release the special or locked nut in order to secure the dead cover.

(d) *Side ports.* Gangway, stowing, and coaling ports, and similar openings in the vessel's sides shall be designed and constructed to the approval of the Commandant. Such ports or openings shall be in no case fitted so as to have their lowest point below the deepest subdivision load line.

(e) *Piping openings in vessel's sides.* Requirements for inlets and discharges of scuppers, sanitary piping, main and auxiliary machinery piping, and ash and rubbish-chutes, etc., are in § 55.10–70 of Subchapter F (Marine Engineering) of this chapter.

§ 191.10–35 Watertight integrity above the margin line.

(a) *General.* (1) All reasonable and practicable measures shall be taken to limit the entry and spread of water above the bulkhead deck. Such measures may include partial bulkheads or webs.

(2) When partial watertight bulkheads and webs are fitted on the bulkhead deck, above or in the immediate vicinity of main subdivision bulkheads, they shall have watertight shell and bulkhead deck connections so as to restrict the flow of water along the deck when the vessel is in a heeled-damaged condition. Where the partial watertight bulkhead does not line up with the bulkhead below, the bulkhead deck between shall be made effectively watertight.

(b) *Decks.* (1) The bulkhead deck or a deck above it shall be weathertight in the sense that in ordinary sea conditions water will not penetrate in a downward direction.

(2) All openings in the exposed weather deck shall have coamings of ample height and strength and shall be provided with efficient means for expeditiously closing them weathertight.

(3) Freeing ports, open rails, and/or scuppers shall be fitted as necessary for rapidly clearing the weather deck of water under all weather conditions.

(c) *Side openings.* (1) All side openings in the vessel's shell above the bulkhead deck and all deck openings in or above the bulkhead deck shall comply with the applicable requirements of Subchapters E (Load Lines) and F (Marine Engineering) of this chapter for type closures and fittings. Port lights, gangway, and stowing ports and other means for closing openings in the shell plating above the margin line shall be of efficient design and construction and of sufficient strength having regard to the spaces in which they are fitted and their positions relative to the deepest subdivision load line.

(2) Efficient inside dead covers, arranged so that they can be easily and effectively closed and secured watertight, shall be provided for all port lights to spaces below the first deck above the bulkhead deck.

Subpart 191.15—Stability Test

§ 191.15–1 When required.

(a) Except as otherwise provided in this section, each vessel to which this part pertains shall be subjected to a stability test conducted under the supervision of the Coast Guard and the results of the test shall be approved before the vessel is placed in service.

(b) The Commandant may allow the stability test of a vessel to be dispensed with provided basic stability data are available from the stability test of a sister vessel and it is shown to the satisfaction of the Commandant that reliable stability information for the exempted vessel can be obtained from such basic data.

(c) Except for vessels on an international voyage, the Commandant may

allow the stability test of a vessel to be dispensed with in exceptional cases where it can be shown to his satisfaction that due to the form, construction, and arrangement of the vessel stability calculations can be safely made without a stability test being performed.

§ 191.15–5 Procedure.

(a) *Plans required.* The following plans are essential for use in conducting the stability test and determining the results, and if these plans have not been previously submitted, they shall be made available at the time of the test:

Lines plan.
Curves of form, or hydrostatic curves.
General arrangement plan of decks, holds, inner bottoms, etc.
Inboard and outboard profile.
Midship section.
Capacity plan showing capacities and vertical and longitudinal centers of gravity of cargo spaces, tanks, etc.
Tank sounding tables.
Draft mark locations.

(b) *Stability test preparations.* (1) Preparations as noted in this paragraph shall be made to place a vessel in suitable condition for a stability test. The Coast Guard representative supervising the stability test may relax from these standards in a particular instance if, in his opinion, such relaxation is warranted and will not materially affect the reliability of the results of the test.

(2) To obtain dependable stability results, all tanks on the vessel, as far as practicable, shall be either completely empty and dry or fully pressed up and without air pockets. Where this is impracticable, slack tanks may be accepted provided their free surface can be readily and accurately determined for the angles of heel to be obtained during the stability test.

(3) The vessel shall be as nearly complete as practicable when the test is conducted. If additional material or equipment is to be installed after the test, a complete list of such items by weight and location shall be prepared.

(4) All dunnage, tools, and other items extraneous to the completed vessel shall be removed before the test.

(5) The vessel shall be moored in a location reasonably protected from broadside wind, waves, and tide. The depth of water shall be sufficient to provide ample clearance under the vessel against grounding. Mooring lines shall be arranged so that they will not interfere with the free rolling or listing of the vessel.

Subpart 191.20—Stability Standards

§ 191.20–1 General.

(a) With the vessel in the intact condition, the net metacentric height at any operating draft, including allowance for normally slack tanks, shall not be less than the standards outlined in this subpart, taken singly, and the most severe requirement shall govern at any particular draft.

§ 191.20–5 Weather criteria.

(a) The required minimum metacentric height (GM) in feet at any particular draft is obtained from the following formula:

$$GM=\frac{PAh}{\Delta \tan \Theta} \quad (1)$$

where:

$P=0.005+\left(\frac{L}{14,200}\right)^2$ tons/ft² for ocean and coastwise service.

$P=0.0033+\left(\frac{L}{14,200}\right)^2$ tons/ft² for partially protected waters such as lakes, bays and sounds, and Great Lakes (summer service).

$P=0.0025+\left(\frac{L}{14,200}\right)^2$ tons/ft² for protected waters such rivers, harbors, etc.

L = Length between perpendiculars in feet.
A = Projected lateral area in square feet of portion of vessel above waterline.
h = Vertical distance in feet from center of A to center of underwater lateral area or approximately one-half draft point.
Δ = Displacement in long tons.
Θ = Angle of heel to one-half the freeboard to the deck edge or 14 degrees whichever is less. (For vessels having a discontinuous weather deck or abnormal sheer, the angle to one-half the freeboard may be suitably modified).

§ 191.20–10 Special cases.

(a) The criteria in § 191.20–5 is generally limited in application to flush deck powered vessels of ordinary form and proportions. In the case of vessels not considered to come in this category, the Commandant may require or accept a modification of these criteria or such additional calculations as may be necessary to demonstrate the limits of safe operation.

§ 191.20–15 Damaged stability standards.

(a) *General requirements.* Sufficient intact stability shall be provided in all service conditions so as to enable the vessel to withstand flooding in any one main compartment. Assumed damage shall extend transversely one-fifth the beam, longitudinally 10 feet plus 3 percent of the load waterline length, or 35 feet, whichever is less, with no main bulkhead involved, and vertically from base line upward without limit.

(b) *Damaged stability calculations.* (1) The requirement of paragraph (a) of this section shall be determined by calculations which take into consideration the proportions and design characteristics of the vessel and the arrangement and configuration of the damaged compartments. Where decks, inner skins, or longitudinal bulkheads are to be fitted of sufficient tightness to seriously restrict the flow of water, the Commandant shall be satisfied that proper consideration is given to such restrictions in the calculations. Where it is considered that the range of stability in the damaged condition is doubtful, the Commandant will require the investigation thereof.

(2) In making these calculations the vessel is to be assumed in the worst anticipated service condition as regards stability.

(3) For damaged stability calculations the volume and surface permeabilities shall be in general as indicated in Table 191.20–15(b)(3). Higher surface permeabilities are to be assumed in respect to spaces which, in the vicinity of the damage waterplane, contain no substantial quantity of accommodation or machinery and spaces which are not generally occupied by any substantial quantity of cargo or stores. The maximum surface permeability which must be assumed need not exceed 95.

TABLE 191.20–15(b)(3)

Spaces	*Permeability*
Appropriated to cargo or stores	60.
Appropriated to accommodations	95.
Appropriated to machinery	85.
Intended for liquids (use value resulting in more severe requirement).	0 or 95.

(4) Unsymmetrical flooding is to be kept to a minimum consistent with efficient arrangements. Where it is necessary to correct large angles of heel, the means adopted shall, where practicable, be self-acting, but in any case where controls to cross-flooding fittings are provided they shall be operable from above the bulkhead deck. The construction and arrangement of such fittings and of their controls, together with the estimated maximum heel before equalization is subject to approval by the Commandant. The time for equalization to acceptable heel limits, as provided in subparagraphs (6) and (7) of this paragraph, shall in no case be more than 15 minutes.

(5) For symmetrical flooding or in the case of unsymmetrical flooding, after equalization measures have been taken, there shall be a positive residual metacentric height of at least 2 inches (calculated on the basis of the initial undamaged displacement).

(6) For unsymmetrical flooding the remaining heel after equalization by use of manually operated cross connections shall not exceed 7 degrees. Where equalization is either self-acting through open cross connections of large area or where no equalization is involved, a greater heel up to, but not in excess of, 15 degrees may be allowed. Where final heel in excess of 7 degrees is allowed, it must be shown to the satisfaction of the Commandant that the range and dynamic reserve of stability in the damaged condition is satisfactory.

(7) In no case shall the margin line be submerged in the final stage of flooding. If it is considered that the margin line may become submerged during an intermediate stage of flooding, the Commandant may require such investigations and arrangements as shall be considered necessary for the safety of the vessel.

(8) Righting arm curves for the vessel in the flooded condition shall be submitted in those cases where:

(i) The final equilibrium heel angle is greater than 7 degrees; or,

(ii) An intermediate heel angle prior to equalization is in excess of 15 degrees; or,

(iii) The margin line is immersed during intermediate flooding.

(c) *Relaxation of requirements.* (1) No relaxation from the requirements for damaged stability may be considered by the Commandant unless it is shown that the intact metacentric height in any service condition necessary to meet these requirements is excessive for the service intended.

(2) Relaxations from the requirements for damaged stability shall be permitted only in exceptional cases and subject to

the condition that the Commandant is to be satisfied that the proportions, arrangements and other characteristics of the vessel are the most favorable to stability after damage which can practically and reasonably be adopted in the particular circumstances.

§ 191.20–20 Special operating conditions.

(a) Where a vessel may be operated under conditions where its stability will be affected by factors not covered by §§ 191.20–5 and 191.20–15 such factors shall be investigated to determine if the vessel has sufficient stability to meet such conditions.

Subpart 191.25—Ballast

§ 191.25–1 When required.

(a) Where it is determined that a vessel does not have sufficient stability to meet the requirements of the stability standard and the characteristics of the vessel cannot be altered to provide the required stability, ballast may be required. This ballast may be solid fixed ballast, liquid ballast, or both.

§ 191.25–5 Fixed ballast.

(a) When fixed ballast is installed, its amount and location shall be included in the stability information provided the vessel.

(b) Fixed ballast shall not be removed from the vessel or relocated unless first approved by the Commandant, except that such ballast may be temporarily moved for examination or repair of the vessel and then only under the supervision of a marine inspector.

§ 191.25–10 Liquid ballast.

(a) Liquid ballast may be used when necessary to provide satisfactory draft, trim, weight distribution, or stability.

(b) If it is necessary to put liquid ballast in oil tanks, the oily ballast shall not be discharged overboard within any of the prohibited zones as defined in the Oil Pollution Act, 1961 (33 U.S.C. 1011), except through oily water separators which meet the requirements of § 55.10–25(n) of Subchapter F (Marine Engineering), or directly into sludge barges, shore facilities, or other approved means.

Subpart 191.30—Stability Instructions for Operating Personnel

§ 191.30–1 Data supplied master.

(a) The master shall be supplied with such reliable information as is necessary to enable him by rapid and simple processes to obtain accurate guidance as to the stability of the ship under varying conditions of service, so as to permit compliance with stability requirements.

(b) This information and necessary related plans and data shall be submitted to the Commandant for approval.

§ 191.30–5 Conditions under which calculations made.

(a) The master of the vessel shall be informed of the conditions under which the damaged stability calculations have been made and advised to what extent the vessel can safely withstand damage under these assumed conditions.

§ 191.30–10 Cross-flooding.

(a) In the case of a vessel requiring cross-flooding, the master shall be provided with the conditions of stability on which the calculations of heel are based and be warned that excessive heel might result should the vessel sustain damage when in a less favorable condition. Suitable information shall be supplied concerning the use of any special cross-flooding fittings.

§ 191.30–15 Type of instructions.

(a) In all ships on international voyages the information called for by this subpart shall be provided in booklet form; at least two copies, one for the master and one for the chief engineer, being supplied each ship. Included as part of these booklets, at suitably reduced scale, shall be plans showing clearly for each deck and hold the boundaries of the watertight compartments, the openings therein with the means of closure and position of any controls thereof, and the arrangements for the correction of any list due to flooding.

(b) Depending upon the extent of necessary information, such booklets may also be required for vessels not on international voyages. In any case, it will be required that any information necessary to compliance with stability and watertight integrity requirements be supplied.

(c) Whenever alterations are made to the vessel so as to materially affect the stability information, amended stability information shall be provided. If necessary, the vessel shall have a new stability test.

Subpart 191.35—Stability Letter

§ 191.35–1 Posting.

(a) Each vessel subject to the requirements of this part shall have posted under glass or other transparent material in the pilothouse a stability letter issued by the Coast Guard before the vessel is placed in service.

§ 191.35–5 Information contained in stability letter.

(a) Stability letters will record approval of the information required by Subpart 191.30 and will set forth the master's responsibility for maintaining satisfactory stability conditions at all times.

(b) Stability letters issued to vessels which are exempted from a stability test in accordance with § 191.15–1 will record this fact.

Subpart 191.90—Vessels Contracted for Prior to March 1, 1967

§ 191.90–1 Requirements.

(a) Except for vessels covered by paragraph (b) of this section, vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Existing arrangements, materials, and facilities previously approved will be considered satisfactory so long as they meet the minimum requirements of this paragraph and they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original installation: *Provided*, That in no case will a greater departure from the standards of Subparts 191.05 through 191.35 be permitted than presently exists.

(2) The details and arrangements shall be in general agreement with the applicable provisions of Subparts 191.05 through 191.35 insofar as is reasonable and practicable.

(b) For those vessels contracted for prior to March 1, 1967, which were allowed to substitute subdivision for lifeboatage, i.e., which carry 125 percent primary lifesaving equipment in lieu of 250 percent, shall meet the standards of Subparts 191.05 through 191.35 applicable to vessels contracted for on or after March 1, 1967.

§ 191.90–5 Stability information.

(a) For vessels contracted for prior to March 1, 1967, the owners shall furnish for maintenance on the vessels and use by the master and chief engineer two copies of any information necessary to maintain compliance with stability and watertight integrity applicable to such vessels.

(b) Whenever alterations are made to the vessel so as to materially affect the stability information, amended stability information shall be provided to the vessel for use by the master and chief engineer.

(c) This stability information shall be made available to marine inspectors upon request.

§ 191.90–10 Stability letter.

(a) Each vessel subject to this subpart shall have posted under glass or other transparent material in the pilothouse a stability letter issued by the Coast Guard.

(b) The stability letter will record approval of the information required by this part and will set forth the master's responsibility for maintaining satisfactory stability conditions at all times. If the vessel was exempted from a stability test, the stability letter will record this fact whenever issued on or after March 1, 1967.

PART 192—LIFESAVING EQUIPMENT

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AUTHORITY: The provisions of this Part 192 issued under R.S. 4405, as amended, 4462, as amended, sec. 5, 70 Stat. 424; 46 U.S.C. 375, 416, 445. Interpret or apply R.S. 4417, as amended. 4418, as amended, 4453, as amended, 4488, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, sec. 17, 49 Stat. 166, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended; 46 U.S.C. 391, 392, 435, 481, 395, 363, 526p, 367; E.O. 11239, July 31, 1965, 30 F.R. 9671, 3 CFR, 1965 Supp. Treasury Dept. Orders 120, July 31, 1950, 15 F.R. 6521; CGFR 56-28, July 24, 1956, 21 F.R. 5659; 167-38, Oct. 26, 1959, 24 F.R. 8857; 167-66, Sept. 8, 1965, 30 F.R. 11735.

Subpart 192.01—Application

§ 192.01-1 Details of application.

(a) Except as specifically noted, the provisions of this part shall apply to all vessels.

Subpart 192.05—General Provisions Pertaining to Lifesaving Equipment

§ 192.05-1 Equipment of an approved type.

(a) Where equipment in this part is required to be of an approved type, such equipment requires the specific approval of the Commandant. Such approvals are published in the FEDERAL REGISTER, and in addition, are contained in Coast Guard publication CG-190, "Equipment Lists."

(b) Specifications for many of the items required to be of an approved type have been promulgated and are contained in Subchapter Q (Specifications) of this chapter. In general, such specifications are of interest only to the manufacturer of specific items of equipment.

§ 192.05-5 Equipment installed but not required.

(a) Where items of lifesaving equipment are not required, but are installed, such equipment and its installation shall meet the requirements of this part.

§ 192.05-10 Primary lifesaving equipment.

(a) The term "primary lifesaving equipment" means a lifeboat or an acceptable substitute. The acceptable substitutes may include liferafts, lifefloats, rescue boats, and buoyant apparatus under certain conditions. Life preservers and ring life buoys are not included in the definition of "primary lifesaving equipment."

Subpart 192.10—Lifeboats, Liferafts, Lifefloats, Buoyant Apparatus, and Rescue Boats

§ 192.10-1 Application.

(a) Except as otherwise provided in this section, the provisions of this subpart shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 192.10-90.

(c) In the case of special types of vessels subject to the International Convention for Safety of Life at Sea, 1960, which are not specifically treated in this subpart, the Commandant may give special consideration as to lifesaving equipment requirements to the extent permitted by the International Convention for Safety of Life at Sea, 1960.

§ 192.10-5 Type of lifeboats, liferafts, lifefloats, buoyant apparatus, and rescue boats required.

(a) *Lifeboats.* (1) All lifeboats shall be of an approved type, constructed in accordance with Subpart 160.035 of Subchapter Q (Specifications) of this chapter except as specifically noted in this part.

(2) All lifeboats certified to carry 60 or more but not over 100 persons shall be either motor lifeboats or shall be fitted with an approved type of hand-propelling gear. Lifeboats carrying more than 100 persons shall be motor lifeboats.

(3) A Class 1 motor lifeboat is one that is fitted with a compression-ignition engine, is capable of being readily started in all conditions, and has sufficient fuel for 24 hours continuous operation. The speed ahead in smooth water when loaded with its full complement of persons and equipment shall be at least 6 knots.

(4) Except as further modified in this subparagraph, all lifeboats, except those installed on vessels in river service, shall be fitted with suitable disengaging apparatus consisting of fixed hooks in the lifeboat or mechanical disengaging apparatus. Mechanical disengaging apparatus, if fitted, shall be of an approved type, constructed in accordance with Subpart 160.033 of Subchapter Q (Specifications) of this chapter.

(i) All lifeboats installed on ocean, coastwise, or Great Lakes vessels of over 3,000 gross tons shall be fitted with mechanical disengaging apparatus so arranged as to make it possible for the lifeboats to be launched with their full complement of persons and equipment while such vessels are underway or stopped, and for both ends of the lifeboats to be launched with their full under tension or not by one person. Simultaneous release shall be effected by partially rotating a shaft which shall be continuous and extended from points of contact with the hooks.

(ii) All lifeboats installed on any particular vessel shall be fitted with the same type of disengaging apparatus.

(iii) On small vessels, the Commandant may approve means other than those previously mentioned to agree with the needs of a particular vessel.

(b) *Liferafts.* (1) All rigid type liferafts shall be of an approved type, constructed in accordance with Subpart 160.018 of Subchapter Q (Specifications) of this chapter. Type A liferafts shall be stowed on the standard liferaft skids required by § 192.15–10(c)(1) unless specifically noted otherwise. Rigid type liferafts shall not be used as required equipment on vessels on an international voyage.

(2) All inflatable liferafts shall be of an approved type, constructed in accordance with Subpart 160.051 of Subchapter Q (Specifications) of this chapter.

(3) On vessels on an international voyage, each inflatable liferaft shall have a carrying capacity of not less than 6 nor more than 25 persons.

(c) *Lifefloats.* All lifefloats shall be of an approved type, constructed in accordance with Subpart 160.027 of Subchapter Q (Specifications) of this chapter.

(d) *Buoyant apparatus.* All buoyant apparatus shall be of an approved type, constructed in accordance with Subpart 160.010 of Subchapter Q (Specifications) of this chapter.

(e) *Rescue boats.* In general, a suitable rescue boat shall be a small lightweight boat of rigid construction, with built-in buoyancy and capable of being readily launched and easily maneuvered. Also it shall be of adequate proportion to permit taking an unconscious person on board without capsizing. A rescue boat and its installation shall be acceptable to the Officer in Charge, Marine Inspection, as suitable for the rescue of persons accidentally falling over the side, or for similar emergency purposes. The size, shape, installation, and other factors of suitability will be determined with due consideration of the size, arrangement, intended service, and crew requirements of the vessel on which it is to be installed.

§ 192.10–10 Requirements for vessels in ocean or coastwise service.

(a) All vessels shall be provided with sufficient lifeboats on each side of the vessel to accommodate all persons on board.

(b) Lifeboats shall be not less than 24 feet in length, except where owing to the size of the vessel, or for other reasons, the Commandant considers the carriage of such lifeboats to be unreasonable or impracticable. However, in no case shall lifeboats of less than 16 feet in length be used.

(c) All vessels of 1,600 gross tons and over on an international voyage shall carry at least one motor propelled lifeboat of Class 1.

(d) In addition to the lifeboats required by paragraph (a) of this section, all vessels on an international voyage and all vessels in ocean service shall be provided with liferafts of such aggregate capacity to accommodate at least one-half the total number of persons on board. Those vessels having widely spaced accommodations and/or working spaces shall have at least one liferaft in each such location.

(e) Inflatable liferafts may be substituted for lifeboats on certain vessels not on an international voyage in accordance with § 192.10–55.

(f) Except for vessels on an international voyage, vessels which meet one compartment subdivision and damage stability requirements and whose structural fire protection is in accordance with the requirements for new vessels contained in Subpart 190.07 of this subchapter may carry primary lifesaving equipment of 100 percent in boats and 25 percent in inflatable liferafts in lieu of that primary lifesaving equipment required by paragraphs (a) and (d) of this section.

§ 192.10–15 Requirements for seagoing barges.

(a) All manned seagoing barges shall be provided with approved lifeboats with sufficient capacity for all persons on board.

(b) Inflatable liferafts may be substituted for lifeboats on certain barges in accordance with § 192.10–55.

§ 192.10–40 Requirements for vessels in Great Lakes; lakes, bays, and sounds; or river service.

(a) All vessels, except those on an international voyage, shall be provided with lifeboats and liferafts as required by Table 192.10–40(a).

Table 192.10–40(a)—Lifeboats and liferafts required on vessels in Great Lakes and lakes, bays, and sounds, and river service.

	Percent
Percentage of persons to be accommodated	100
Percentage of required equipment in lifeboats	50
Percentage of required equipment which may be in Type A or Type B liferafts	50

(b) Inflatable liferafts may be substituted for lifeboats and liferafts on certain vessels in accordance with § 192.10–55.

(c) All vessels on an international voyage shall meet the applicable requirements of § 192.10–10.

§ 192.10–55 Inflatable liferafts as an alternate for lifeboats, other liferafts, lifefloats, and buoyant apparatus on certain vessels not on an international voyage.

(a) (1) On all vessels inflatable liferafts may be permitted as substitutes for other types of liferafts, lifefloats, and buoyant apparatus wherever they may be required.

(2) The capacity of inflatable liferafts carried in place of other liferafts, lifefloats, and buoyant apparatus shall be at least equivalent to that required of the equipment for which substitution is made.

(3) The substitution of inflatable liferafts shall not be made without prior approval of the Officer in Charge, Marine Inspection.

(b) On all vessels less than 3,000 gross tons the substitution of liferafts for lifeboats may be permitted as follows:

(1) (i) On all vessels under 500 gross tons, inflatable liferafts may be substituted for all required lifeboats.

(ii) The total capacity of the inflatable liferafts shall be at least equal to the total number of persons that the lifeboats would have been required to accommodate. Partial substitution is permissible provided the aggregate lifeboat and inflatable liferaft capacity is sufficient to accommodate the required number of persons, as indicated above.

(iii) Vessels certificated for ocean, coastwise, or Great Lakes service, where substitution of inflatable liferafts is made, at least a 16-foot approved lifeboat shall be provided for rescue purposes. Vessels certificated for other than ocean, coastwise or Great Lakes service where substitution of inflatable liferafts is made, an approved lifeboat or a rescue boat as described in § 192.10–5(e) shall be provided. In the case of partial substitution, an approved lifeboat may serve as the rescue boat.

(2) (i) On all vessels of 500 gross tons and upward to 1,600 gross tons, inflatable liferafts may be substituted for all required lifeboats provided one approved lifeboat of a size acceptable to the Officer in Charge, Marine Inspection, suitable for rescue purposes, is installed.

(ii) The aggregate lifeboat and inflatable liferaft capacity shall be at least equal to the total number of persons that the lifeboats would have been required to accommodate.

(iii) The launching arrangement and location of the lifeboat to be used as rescue boat shall be such that it can be readily launched and shall be to the satisfaction of the Officer in Charge, Marine Inspection.

(3) (i) On all vessels of 1,600 gross tons and upward to 3,000 gross tons, inflatable liferafts may be substituted for all except two of the required lifeboats. These lifeboats shall be of a size acceptable to the Officer in Charge, Marine Inspection, and shall be suitable for rescue purposes. In all cases, two approved lifeboats, one on each side, shall be provided.

(ii) The aggregate lifeboat and inflatable liferaft capacity shall be at least equal to the total number of persons that the lifeboats, for which substitutions are made plus those remaining on board, would have been required to accommodate.

(4) The substitution of inflatable liferafts for lifeboats shall not be made without prior approval of the Officer in Charge, Marine Inspection. However, for new construction this approval may be granted by the Commandant.

(c) On all seagoing barges of 100 gross tons and over an inflatable liferaft may be substituted for the required lifeboat, the total capacity of which shall be sufficient to accommodate all persons on board. Where substitution of inflatable liferafts is made, a suitable rescue boat shall be provided.

(d) The Commandant may give special consideration to the substitution of approved inflatable liferafts for required lifeboats on vessels of 3,000 gross tons and over.

§ 192.10–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Except as specifically modified by this paragraph, the requirements of §§ 192.10–5 through 192.10–55 shall be complied with insofar as the number and general type of lifesaving equipment is concerned.

(2) Existing items of lifesaving equipment previously approved, but not meeting the applicable specifications or requirements set forth in §§ 192.10–5 through 192.10–55 may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs, alterations, and replacements may be permitted to the same standards as the original installation. However, all new installations or major replacements shall meet the applicable specifications or requirements for new vessels.

Subpart 192.15—Stowage and Marking of Lifeboats, Liferafts, Lifefloats and Buoyant Apparatus

§ 192.15–1 Application.

(a) The provisions of this subpart, with the exception of § 192.15–90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 192.15–90.

§ 192.15–5 General.

(a) The lifeboats, liferafts, lifefloats, and buoyant apparatus shall be readily available in the case of emergency, and shall be kept in good working order and available for immediate use at all times when the vessel is being navigated and, insofar as reasonable and practicable, while the vessel is not being navigated.

(b) The decks on which lifeboats, liferafts, lifefloats, and buoyant apparatus are carried shall be kept clear of any obstructions which would interfere with the immediate launching of the lifesaving appliances.

§ 192.15–10 Stowage.

(a) *General.* Lifeboats, liferafts, lifefloats, and buoyant apparatus shall be stowed in such a manner that:

(1) They are capable of being launched in the shortest possible time.

(2) They shall not impede the launching or handling of other lifesaving appliances.

(3) They shall not impede the marshalling of persons at the embarkation stations, or their embarkation.

(4) They shall be capable of being put in the water safely and rapidly even under unfavorable conditions of list and trim.

(b) *Lifeboat stowage.* (1) Every lifeboat shall be attached to a separate set of davits.

(2) Suitable access to the lifeboats shall be provided to enable the crew to prepare the lifeboats for launching.

(3) Lifeboats shall be so stowed that embarkation into them may be made rapidly and in good order.

(4) Lifeboats shall not be stowed in the bows of the vessel nor as far aft as to be endangered by the propellers or overhang of the stern. The clear horizontal distance between the after lifeboat davit and the propeller shall be not less than 1.5 times the length of the lifeboat without special acceptance by the Commandant. Where the vessel has extreme shape or where other factors are present affecting the clear launching of the lifeboat, the Commandant may require this distance to be increased.

(5) Lifeboats shall be so stowed that it shall not be necessary to lift them in order to swing out the davits, except on small vessels where such requirement is unreasonable and impracticable in the opinion of the Officer in Charge, Marine Inspection.

(6) Means shall be provided for bringing the lifeboats against the ship's side and holding them there so that persons may be safely embarked.

(7) On vessels certificated for ocean or coastwise service, lifeboats shall be fitted with skates or other suitable means to facilitate launching against an adverse list of up to 15 degrees. However, skates may be dispensed with if, in the opinion of the Commandant, the arrangements are such as to insure that the lifeboats can be satisfactorily launched without such skates.

(8) On vessels in ocean and coastwise service, where applicable, means shall be provided outside the machinery space to prevent the discharge of water into the lifeboats while they are being lowered. This shall consist of baffles to deflect the water down the vessel's side, or reach rods, or other means to close the discharge openings.

(c) *Liferaft stowage.* (1) Type A liferafts shall be stowed on standard skids, constructed in accordance with Subpart 160.042 of Subchapter Q (Specifications) of this chapter.

(2) Type B liferafts shall be stowed in such a manner that they may be readily launched.

(3) Inflatable liferafts shall be stowed in such a manner that they will float free in the event of the vessel sinking. Stowage and launching arrangements will be to the satisfaction of the Officer in Charge, Marine Inspection.

(d) *Lifefloat and buoyant apparatus stowage.* (1) Lifefloats and buoyant apparatus shall be stowed in such a manner as to be readily launched. Lifefloats exceeding 400 pounds in weight shall be stowed in such a manner as not to require lifting before launching.

(2) Lifefloats and buoyant apparatus shall not be secured to the vessel except by lashings which can be easily slipped. They may be stowed in tiers one above the other, but not more than four high. When stowed in tiers, the separate units shall be kept apart by suitable distance pieces.

(3) Means shall be provided to prevent shifting.

§ 192.15–15 Marking.

(a) Lifeboats, liferafts, lifefloats, and buoyant apparatus shall be marked as required by §§ 196.37–37 and 196.37–40 of this subchapter.

§ 192.15–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) The provisions of §§ 192.15–5 through 192.15–15 shall be met except as further set forth in this paragraph.

(2) The requirements of § 192.15–10 (b) (7) shall apply unless in the opinion of the Officer in Charge, Marine Inspection, it is unreasonable or impracticable, or the arrangement or construction of the vessel make the use of skates or similar appliances unnecessary.

(b) Existing arrangements or construction previously approved will be considered satisfactory so long as they are maintained in a good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original design provided that in no case will a greater departure from the standards of §§ 192.15–5 through 192.15–15 be permitted than presently exists.

Subpart 192.20—Equipment for Lifeboats, Liferafts, Lifefloats, and Buoyant Apparatus

§ 192.20–1 Application.

(a) The provisions of this subpart, with the exception of § 192.20–90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 192.20–90.

§ 192.20–5 General.

(a) Equipment for lifeboats, liferafts, lifefloats, and buoyant apparatus shall be of good quality, efficient for the purpose they are intended to serve, and kept in good condition.

(b) Lifeboats, liferafts, lifefloats, and buoyant apparatus shall be fully equipped before the vessel is navigated and the equipment shall remain in such lifesaving appliances throughout the voyage, except as provided in § 196.15–45 (e) of this subchapter.

(c) It shall be unlawful to stow in any lifeboat, liferaft, lifefloat, or buoyant apparatus any article not required by this subpart unless such article can be properly stowed so as not to reduce the seating capacity or space available to the occupants and so as not to adversely affect the seaworthiness of such appliances or, in the case of lifeboats, overload the davits or winches.

(d) Loose equipment, except boathooks in lifeboats, shall be securely attached to the lifesaving appliance to which it belongs.

§ 192.20–10 Required equipment for lifeboats.

(a) The lifeboats for all vessels shall be equipped in accordance with Table 192.20–10(a). For a description of the items contained in this table, and the units comprising the items, see the applicable paragraphs of § 192.20–15. The letter identification prefixing the item in the table corresponds to the paragraph designations in § 192.20–15.

TABLE 192.20–10(a)

Letter identification	Item	Ocean and coastwise		Great Lakes	Lakes, bays, and sounds; and rivers
		Other than seagoing barges	Seagoing barges		
a	Bailer	1	None	1	None.
b	Bilge pump	1 [1]	None	None	None.
c	Boathooks	2	2	1	1.
d	Bucket	2	1	1	1.
e	Compass and mounting	1	None	None	None.
f	Ditty bag	1	None	None	None.
g	Drinking cups	1	1	None	None.
h	Fire extinguishers (motor-propelled lifeboats only).	2	2	2	2.
i	First-aid kit	1	None	None	None.
j	Flashlight	1	None	1	None.
k	Hatchets	2	None	2	1.
l	Heaving line	2	None	None	None.
m	Jackknife	1	1	None	None.
n	Ladder, lifeboat gunwale	1	None	None	None.
o	Lantern	1	1	1	1.
p	Lifeline	1	1	1	1.
q	Life preservers	2	2	2	2.
r	Locker	1	None	1	None.
s	Mast and sail (oar-propelled lifeboats only).	1	None	None	None.
t	Matches (boxes)	2	2	1	1.
u	Milk, condensed (pounds per person)	1	None	None	None.
v	Mirrors, signaling	2	None	None	None.
w	Oars	1 unit [2]	1 unit [2]	1 unit [2]	1 unit.[2]
x	Oil, illuminating (quarts)	1	None	1	None.
y	Oil, storm (gallons)	1	None	1	None.
z	Painter	2	1	2	1.
aa	Plugs	1	1	1	1.
bb	Provisions (pounds per person)	2	None	None	None.
cc	Rowlocks	1 unit [2]	1 unit [2]	1 unit [2]	1 unit.[2]
dd	Rudder and tiller	1	1	1	None.
ee	Sea anchor	1	None	1	None.
ff	Signals, distress, floating orange smoke	2	None	None	None.
gg	Signals, distress, red hand flare	1 unit [2]	None	½ unit [2]	None.
hh	Signals, distress, red parachute flare	1 unit [2 4]	None	½ unit [2]	None.
ii	Tool kit (motor-propelled lifeboat only)	1 unit [2]	1 unit [2]	1 unit [2]	1 unit.[2]
jj	Water (quarts per person)	3	1	None	None.
kk	Whistle, signaling	1	None	None	None.
ll	Fishing kit	1	None	None	None.
mm	Cover, protecting	1	None	None	None.
nn	Signals, lifesaving	1	None	None	None.
oo	Desalting kit	1 [4]	None	None	None.

[1] Motor-propelled lifeboats, certified for 100 or more persons, shall be fitted with an additional hand bilge pump of an approved type or a power bilge pump.
[2] For description of units, see § 192.20–15.
[3] Vessels in coastwise service need only carry 1 unit for each 5 lifeboats or fraction thereof.
[4] Optional equipment. See § 192.20–15 (jj) water.

§ 192.20–15 Description of equipment for lifeboats.

(a) *Bailer.* The bailer shall have a lanyard attached and shall be of sufficient size and suitable for bailing.

(b) *Bilge pump.* Bilge pumps shall be of an approved type, constructed in accordance with Subpart 160.044 of Subchapter Q (Specifications) of this chapter. They shall be of the size given in Table 192.20–15(b) depending upon the capacity of the lifeboat as determined by the six-tenths rule as described in § 160.035–8(b) of Subchapter Q (Specifications) of this chapter.

TABLE 192.20–15(b)

Capacity of lifeboat, cubic fee.		Bilge pump size
Over	Not over	
	330	1
330	700	2
700		3

(c) *Boathooks.* Boathooks shall be of the single hook ballpoint type. Boathook handles shall be of clear grained white ash, or equivalent, and of a length and diameter as given in Table 192.20–15(c).

TABLE 192.20–15(c)

Length of lifeboat, feet		Boathook handles	
Over	Not over	Diameter, inches	Length, feet
	23	1¼	8
23	29	1¾	10
29		2	12

(d) *Bucket.* The bucket shall be of heavy gage galvanized iron, or other suitable corrosion-resistant metal, of not less than 2-gallon capacity, and shall have a 6-foot lanyard of 12-thread manila attached.

(e) *Compass and mounting.* The compass and mounting shall be of an approved type, constructed in accordance with U.S. Coast Guard specifications dated December 14, 1944.

(f) *Ditty bag.* The ditty bag shall consist of a canvas bag and shall contain a sailmaker's palm, needles, sail twine, marline, and marline spike.

(g) *Drinking cups.* Drinking cups shall be enamel coated or plastic, graduated in ounces, and be provided with lanyards 3 feet in length.

(h) *Fire extinguisher.* Fire extinguishers shall be of an approved Type B–C, Size I (see § 193.50–5 of this subchapter). One shall be attached to each end of the lifeboat.

(i) *First-aid kit.* The first-aid kit in accordance with Subpart 160.041 of Subchapter Q (Specifications) of this chapter.

(j) *Flashlight.* The flashlight shall be of an approved Type I, Size No. 3, constructed in accordance with Subpart 161.008 of Subchapter Q (Specifications) of this chapter. Three spare cells (or one 3-cell battery) and two spare bulbs, stowed in a watertight container, shall be provided with each flashlight. Batteries shall be replaced yearly during the annual stripping, cleaning, and overhaul of the lifeboats.

(k) *Hatchet.* Hatchets shall be of an approved type, constructed in accordance with Subpart 160.013 of Subchapter Q (Specifications) of this chapter. They shall be attached to the lifeboat by individual lanyards and be readily available for use, one at each end of the lifeboat.

(l) *Heaving Line.* The heaving line shall be of adequate strength, 10 fathoms in length and 1 inch in circumference. It shall be of such quality as to be buoyant after 24 hours submergence.

(m) *Jackknife.* The jackknife (with can opener) shall be of an approved type, constructed in accordance with Subpart 160.043 of Subchapter Q (Specifications) of this chapter.

(n) *Ladder, lifeboat gunwale.* The lifeboat gunwale ladder shall consist of 3 flat wood steps cut out for handholds. The steps shall be spaced 12 inches apart and fastened with ⅝-inch diameter manila rope. Each rope end shall be tied inside the lifeboat at about amidships with the ladder stowed on top of the side benches and ready for immediate use. Other suitable devices may be specifically approved.

(o) *Lantern.* The lantern shall contain sufficient oil to burn for at least 9 hours, and shall be ready for immediate use.

(p) *Lifeline.* The lifeline shall be properly secured to the sides of the lifeboat, along its entire length, festooned in bights not longer than 3 feet, with a seine float in each bight, which float may be omitted if the line is of an inherently buoyant material and absorbs little or no water. The lifeline shall be of a size and strength not less than ⅜-inch diameter manila. The bights shall hang to within 12 inches of the water when the lifeboat is light.

(q) *Life preservers.* Life preservers shall be of an approved type, constructed in accordance with the applicable subparts of Subchapter Q (Specifications) of this chapter.

(r) *Locker.* The locker shall be suitable for the storage and preservation of the small items of equipment.

(s) *Mast and sail.* A unit, consisting of a standing lug sail together with the necessary spars and rigging, shall be provided in general agreement with Table 192.20–15(s). The sails shall be of good quality canvas, or other material acceptable to the Commandant, colored Indian Orange (Cable No. 70072, Standard Color Card of America). Rope rigging shall consist of galvanized wire not less than three-sixteenths of an inch in diameter. The mast and sail shall be protected by a suitable canvas cover.

TABLE 192.20–15(s)

Length of lifeboat, feet		Standing lug sail							Mast [1]		Yard [1]	
Over	Not over	Area, square feet	Luff and head lengths	Leach length	Foot length	Clew to throat	Ounces per square yard	Commercial designation No.	Length	Diameter, ins.	Length	Diameter, ins.
			Ft. In.	Ft. In.	Ft. In.	Ft. In.			Ft. In.		Ft. In.	
.....	17	86	6 11	12 1	8 10	10 10	14.86	10	11 2	3	6 11	2
17	19	94	6 8	13 8	10 0	12 2	14.35	10	12 6	3	7 8	2
19	21	93	7 5	15 1	11 2	13 8	14.35	10	13 10	3½	8 5	2¼
21	23	113	8 3	16 11	12 4	15 1	14.35	10	15 2	3½	9 3	2½
23	25	135	9 0	18 6	13 6	16 6	14.35	10	16 6	4	10 0	3
25	27	158	9 9	20 0	14 7	17 10	17.50	8	17 10	4	10 9	3
27	29	181	10 5	21 5	15 7	19 1	17.50	8	19 2	4½	11 5	3¼
29	31	208	11 0	22 8	16 6	20 3	20.74	6	20 6	4½	12 0	3¼
31.....	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

[1] Mast lengths measured from heel to center of upper halyard sheave. Mast diameters measured at thwart. Mast and yard shall be of clear-grained spruce, fir, or equivalent.
[2] Subject to special consideration.

(t) *Matches.* A box of friction matches in a watertight container stowed in an equipment locker or secured to the underside of the stern thwart if no locker is fitted.

(u) *Milk, condensed.* One pound of condensed milk shall be provided for each person the lifeboat is certified to carry, to be stowed in lockers or other compartments providing suitable protection.

(v) *Mirrors, signaling.* Signaling mirrors shall be of an approved type (see listing under 160.020 in CG–190, Equipment Lists).

(w) *Oars.* A unit, consisting of a complement of rowing oars and steering oar, shall be provided for each lifeboat in accordance with Table 192.20–15(w), except that motor-propelled and hand-propelled lifeboats need only be equipped with four rowing oars and one steering oar. In any case, the emergency lifeboats shall be provided with the full complement of oars prescribed by the table. All oars shall be buoyant.

TABLE 192.20–15(w)

Length of lifeboat, feet		Number of oars		Length of oars, feet	
Over	Not over	Rowing	Steering	Rowing	Steering
.....	15	4	1	8	9
15	19	6	1	10	11
19	21	6	1	11	12
21	23	6	1	12	13
23	25	8	1	13	14
25	27	8	1	14	15
27	.....	8	1	15	16

(x) *Oil, illuminating.* One quart of illuminating oil shall be provided in a metal container.

(y) *Oil, storm.* One gallon of vegetable, fish, or animal oil shall be provided in a suitable metal container so constructed as to permit a controlled distribution of oil on the water, and so arranged that it can be attached to the sea anchor.

(z) *Painter.* Painters shall be of manila rope not less than 2¾ inches in circumference, or equivalent, and of a length not less than three times the distance between the deck on which the lifeboat is stowed and the light draft of the vessel. For lifeboats in vessels on ocean, coastwise, or Great Lakes service one of the painters shall have a long eye splice and be attached to the thwart with a toggle. The other painter shall be attached to the stem.

(aa) *Plug.* The automatic drain required in the lifeboat shall be provided with a cap or plug attached to the lifeboat by a suitable chain.

(bb) *Provisions.* Two pounds of hard bread or its approved equivalent shall be provided for each person the lifeboat is certified to carry. The provisions shall be packaged in hermetically sealed cans of an approved type. The cans shall be stowed in lockers or other compartments providing suitable protection.

(cc) *Rowlocks.* A unit, consisting of sufficient rowlocks and rowlock sockets for each oar required by Table 192.20–15(w) plus two additional rowlocks. The rowlocks shall be attached to the lifeboat by separate chains so as to be available for immediate use, except that the two additional spare rowlocks shall be carried in the equipment locker or stowed near the stern if no locker is fitted. The rowlocks and rowlock sockets shall be distributed so as to provide the maximum amount of single banked oars practicable.

(dd) *Rudder and tiller.* The rudder and tiller shall be constructed in accordance with § 160.035–3(t) in Subpart 160.035 of Subchapter Q (Specifications) of this chapter.

(ee) *Sea anchor.* The sea anchor shall be of an approved type (see listing under 160.019 in CG–190, Equipment Lists).

(ff) *Signals, distress, floating orange smoke.* Two approved floating orange smoke distress signals, constructed in accordance with Subpart 160.022 of Subchapter Q (Specifications) of this chapter. The service use of this equipment shall be limited to 3 years from date of manufacture, and replacement shall be made no later than the first annual stripping, cleaning, and overhaul of the lifeboat after the date of expiration.

(gg) *Signals, distress, red hand flare.* A unit, consisting of 12 approved hand red flare distress signals in a watertight container, constructed in accordance with Subpart 160.021 or Subpart 160.023 of Subchapter Q (Specifications) of this chapter. The service use of this equipment shall be limited to 3 years from date of manufacture, and replacement shall be no later than the first annual stripping, cleaning, and overhaul of the lifeboat after the date of expiration.

(hh) *Signals, distress, red parachute flare.* A unit, consisting of 12 parachute red flare distress signals with an approved means of projecting them, all contained in a portable watertight container; or 12 approved hand-held rocket-propelled parachute red flare distress signals contained in a portable watertight container. Construction shall be in accordance with Subparts 160.024 and 160.028 or Subpart 160.036 of Subchapter Q (Specifications) of this chapter. The service use of this equipment shall be limited to 3 years from date of manufacture, and replacement shall be no later than the first annual stripping, cleaning, and overhaul of the lifeboat after the date of expiration.

(ii) *Tool kit.* The tool kit shall consist of at least the following tools contained in a suitable container:

(1) One 12-ounce ball peen hammer.
(2) One screwdriver with 6-inch blade.
(3) One pair 8-inch slip joint pliers.
(4) One 8-inch adjustable end wrench.

(jj) *Water.* (1) For each person the lifeboat is certified to carry, there shall be provided 3 quarts of drinking water consisting of nine approved hermetically sealed containers per person, constructed and filled in accordance with Subpart 160.026 of Subchapter Q (Specifications) of this chapter. The service life of this equipment shall be limited to 5 years from date of packing, and replacement shall be made no later than the first annual stripping, cleaning, and overhaul of the lifeboat after the date of expiration. Approved desalting kits capable of producing an equal amount of drinking water may be substituted for not more than one-third of the drinking water required to be carried.

(2) The drinking water containers shall be stowed in drinking water tanks, lockers, or other compartments providing suitable protection.

(kk) *Whistle, signaling.* The whistle shall be of the ball type, of corrosion-resistant construction, with a 3-foot lanyard attached, and in good working order.

(ll) *Fishing kit.* The fishing kit shall be of an approved type constructed in accordance with Subpart 160.061 of Subchapter Q (Specifications) of this chapter.

(mm) *Cover, protecting.* The protecting cover shall be of a highly visible

color, and capable of protecting the occupants against injury by exposure.

(nn) *Table of lifesaving signals.* The table shall be in accordance with the provisions of Chapter V, Regulation 16, of the International Convention for Safety of Life at Sea, 1960, and shall be printed on water resistant paper.

(oo) *Desalting kit.* One or more approved desalting kits may be used as a substitute for one-third of the required amount of drinking water per person, and shall be constructed in accordance with Subpart 160.058 of Subchapter Q (Specifications) of this chapter.

§ 192.20–20 Required equipment for liferafts.

(a) The liferafts for all vessels shall be equipped in accordance with Table 192.20–20(a). For a description of the items contained in this table and the units comprising the items see applicable paragraphs of § 192.20–25. The letter identification prefixing the item in the table corresponds to the paragraph of designations in § 192.20–25.

TABLE 192.20–20(a)

Letter identification	Item identification	Ocean and coastwise	Great Lakes	Lakes, bays, and sounds; and rivers
a	Boathook	1	1	1.
b	Drinking cups	1	None	None.
c	Jackknife	1	None	None.
d	Lifeline	1 [1]	1 [1]	1.[1]
e	Matches (boxes)	1	1	None.
f	Mirrors, signaling	2	None	None.
g	Oars	1 unit [2]	1 unit [2]	1 unit.[2]
h	Oil, storm (gallons)	1	1	None.
i	Painter	1	1	1.
j	Provisions (pounds per person)	2	None	None.
k	Rowlocks	1 unit [2]	1 unit [2]	1 unit.[2]
l	Sea anchor	1	1	None.
m	Signals, distress	1 unit [3]	1 unit [3]	None.
n	Water (quarts per person)	1	None	None.
o	Water light	1	1	None.

[1] Not required on Type A liferafts.
[2] For description of units see section 192.20–25.
[3] 1 unit here means 6 hand red flare distress signals and 6 parachute red flare distress signals with an approved means of projecting them.

(b) Inflatable liferafts shall be equipped with ocean service equipment for vessels on ocean and coastwise routes and with limited service equipment for vessels on Great Lakes, lakes, bays, sounds, and river routes in accordance with Subpart 160.051 of Subchapter Q (Specifications) of this chapter.

NOTE: Subpart 160.051 of Subchapter Q (Specifications) of this chapter requires the servicing of inflatable liferafts at approved servicing facilities. Included in the servicing at an approved servicing facility is a complete inspection of the required equipment by a marine inspector.

§ 192.20–25 Description of equipment for liferafts.

(a) *Boathooks.* Boathooks shall be of the single hook ballpoint type. Boathook handles shall be of clear grained white ash, or equivalent, not less than 8 feet long and 1½ inches in diameter.

(b) *Drinking cups.* Drinking cups shall be enameled and provided with ⅛-inch cotton lanyards 3 feet in length.

(c) *Jackknife.* The jackknife (with can opener) shall be of an approved type, constructed in accordance with Subpart 160.043 of Subchapter Q (Specifications) of this chapter.

(d) *Lifeline.* The lifeline shall be properly secured around the sides and ends of the liferaft, festooned in bights not longer than 3 feet, with a seine float in each bight, which float may be omitted if the line is of an inherently buoyant material and absorbs little or no water. The lifeline shall be of a size and strength not less than ⅜-inch diameter manila.

(e) *Matches.* A box of friction matches in a watertight container.

(f) *Mirrors, signaling.* Signaling mirrors shall be of an approved type (see listings under 160.020 in CG–190, Equipment Lists).

(g) *Oars.* A unit, consisting of four rowing oars and one steering oar not less than 8 feet in length shall be provided for liferafts for seven persons or more. For liferafts for six persons or less, a unit shall consist of two paddles not less than 5 feet in length.

(h) *Oil, storm.* One gallon of vegetable, fish, or animal oil shall be provided in a suitable metal container so constructed as to permit a controlled distribution of oil on the water, and so arranged that it can be attached to the sea anchor.

(i) *Painter.* Painters shall be of manila rope not less than 2¾ inches in circumference and of a length not less than three times the distance between the deck on which the liferafts are stowed and the light draft of the vessel.

(j) *Provisions.* Two pounds of hard bread or its approved equivalent shall be provided for each person the liferaft is certified to carry. The provisions shall be packaged in hermetically sealed cans of an approved type. The cans shall be stowed in compartments providing suitable protection.

(k) *Rowlocks.* A unit consisting of five rowlocks attached to the liferaft by separate chains and ready for immediate use, together with proper rowlock sockets so arranged as to provide four rowing positions and one steering position with the liferaft floating either side up. Rowlocks and rowlock sockets are not required on liferafts for six persons or less.

(l) *Sea anchor.* The sea anchor shall be constructed of good quality canvas or other satisfactory material, and shall not be less than 2 feet in diameter.

(m) *Signals, distress.* A unit consisting of equipment as specified in subparagraphs (1) to (3) of this paragraph. The service use of this equipment shall be limited to 3 years from date of manufacture, and replacement shall be made no later than the first annual inspection of the vessel after the date of expiration.

(1) Twelve (12) approved hand red flare distress signals in a watertight container and two approved floating orange smoke distress signals, constructed in accordance with Subparts 160.021 and 160.022 of Subchapter Q (Specifications) of this chapter; or,

(2) Twelve (12) approved hand red flare distress signals in a watertight container and 12 approved hand orange smoke distress signals, constructed in accordance with Subparts 160.021 and 160.037 of Subchapter Q (Specifications) of this chapter; or,

(3) Twelve (12) approved hand combination flare and smoke distress signals, constructed in accordance with Subpart 160.023 of Subchapter Q (Specifications) of this chapter.

(n) *Water.* (1) For each person the liferaft is certified to carry, there shall be provided 1 quart of drinking water consisting of three approved hermetically sealed containers per person, constructed and filled in accordance with Subpart 160.026 of Subchapter Q (Specifications) of this chapter. The service life of this equipment shall be limited to 5 years from date of packing, and replacement shall be made no later than the first annual stripping, cleaning, and overhaul of the liferaft after the date of expiration.

(2) The drinking water containers shall be stowed in compartments providing suitable protection.

(o) *Water light.* The water light shall be of an approved type, constructed in accordance with Subpart 160.012 or 161.001 of Subchapter Q (Specifications) of this chapter. The water light shall be attached to the liferaft by a 12-thread manila lanyard 3 fathoms in length.

§ 192.20–30 Required equipment for lifefloats and buoyant apparatus.

(a) The lifefloats and buoyant apparatus for all vessels shall be equipped in accordance with Table 192.20–30(a). For a description of the items contained in this table, and the units comprising the items, see the applicable paragraphs of § 192.20–35. The letter identification prefixing the item in the table corresponds to the paragraph designation in § 192.20–35.

TABLE 192.20-30(a)

Letter identification	Item	Number required for each lifefloat and buoyant apparatus		
		Ocean and coastwise	Great Lakes	Lakes, bayd sounds, ans, rivers
a	Boathook [1]	1	1	1
b	Lifeline	1	1	1
c	Paddles [1]	4	4	4
d	Painter	1	1	1
e	Water light	1	1	None

[1] Buoyant apparatus need not be equipped with boathook or paddles.

§ 192.20–35 Description of equipment for lifefloats and buoyant apparatus.

(a) *Boathook.* Boathooks shall be of the single hook ballpoint type. Boathook handles shall be of clear grained white ash, or equivalent, not less than 6 feet long and 1½ inches in diameter.

(b) *Lifeline.* The lifeline shall be properly secured around the sides and ends of the lifefloat or buoyant apparatus, festooned in bights not longer than 3 feet, with a seine float in each bight, which float may be omitted if the line is of an inherently buoyant material and absorbs little or no water. The lifeline shall be of a size and strength not less than ⅜-inch diameter manila.

(c) *Paddles.* Paddles shall not be less than 5 feet long.

(d) *Painter.* (1) The painter for buoyant apparatus shall be of manila rope not less than 2 inches in circumference and of a length not less than 6 feet plus the distance between the deck on which the buoyant apparatus is stowed and the light draft of the vessel.

(2) The painter for lifefloats shall be of manila rope not less than 2¾ inches in circumference and of a length not less than three times the distance between the deck on which the lifefloats are stowed and the light draft of the vessel.

(e) *Water light.* The water light shall be of an approved type, constructed in accordance with Subpart 160.012 or 161.001 of Subchapter Q (Specifications) of this chapter. The water light shall be attached to the lifefloat or buoyant apparatus by a 12-thread manila lanyard 3 fathoms in length.

§ 192.20–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Except as specificially modified by this paragraph, the requirements of §§ 192.20–5 through 192.20–35 shall be complied with insofar as the number of items of equipment and the method of stowage of the equipment is concerned.

(2) Existing items of equipment previously approved, but not meeting the applicable specifications or requirements set forth in §§ 192.20–5 through 192.20–35 may be continued in service so long as they are maintained in a good condition to the satisfaction of the Officer in Charge, Marine Inspection. All new installations or replacements shall meet the applicable specifications or requirements in this part for new vessels.

Subpart 192.25—Davits for Lifeboats

§ 192.25–1 Application.

(a) The provisions of this subpart, with the exception of § 192.25–90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 192.25–90.

§ 192.25–5 General.

(a) All gravity and mechanical type davits shall be of an approved type, constructed in accordance with Subpart 160.032 of Subchapter Q (Specifications) of this chapter.

(b) Davits for lifeboats weighing in excess of 5,000 pounds when fully equipped (but without persons) shall be of the gravity type.

(c) All davits shall be so arranged that the lifeboats do not require lifting prior to being swung out, except on small vessels where such requirement is unreasonable or impracticable in the opinion of the Officer in Charge, Marine Inspection.

(d) All davits and necessary gear shall be such as to meet the requirements for the installation test set forth in Subpart 192.35. The design, arrangements, and installation shall be such as to preclude undue delay in getting lifeboats into the water, and shall be of such strength that the lifeboats can be turned out manned by a launching crew and then safely lowered with the full complement of persons and equipment, with the ship listed to 15 degrees either way and with a 10-degree trim.

(e) Radial davits, where permitted, shall comply with the following requirements:

(1) They shall be fitted with means to prevent them from being jerked from their sockets.

(2) They shall maintain a factor of safety of six based on the weight of the fully equipped and loaded lifeboat, except that the weight of the fully equipped lifeboat alone may be used where the lifeboat is launched before being loaded with people.

(3) They shall be fitted with hand gear of sufficient power to insure that the boat can be turned out against a maximum list of 15 degrees.

(4) They shall be shop tested and show no permanent set or undue stress when subjected to a load equal to 2.2 times the working load. In addition, they shall be shop tested with a load equal to 1.1 times the weight of the fully equipped lifeboat with the davit set up to simulate a 15-degree list inboard, and it shall be determined that the hand gear can adequately handle the load in this condition.

(f) Davits shall be so disposed on one or more decks as to permit the lifeboats placed under them to be safely lowered without interference from the operation of any other davits.

(g) On a vessel on which inflatable liferafts have been substituted for lifeboats, a launching device for each lifeboat to be used for rescue purposes shall be installed. Radial type davits or other means may be used in sheltered waters if acceptable to the Officer in Charge, Marine Inspection.

§ 192.25–10 Approved davits and lifelines for davit spans.

(a) All vessels shall be fitted with a set of approved gravity or mechanical davits for each lifeboat carried, except that on small vessels radial type davits or other means may be used if specifically approved by the Commandant.

(b) For all vessels in ocean, coastwise, or Great Lakes service, all davit installations shall have two lifelines fitted to a davit span. The lifelines shall be of such length as to reach the water at the lightest seagoing draft with the vessel listed 15 degrees either way.

§ 192.25–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Except as specifically modified by this paragraph, the requirements of §§ 192.25–5 and 192.25–10 shall be complied with insofar as the number and general type of equipment is concerned.

(2) Existing items of equipment previously approved, but not meeting the applicable specifications or requirements set forth in §§ 192.25–5 and 192.25–10 may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs, alterations, and replacements may be made to the same standards as the original installation. However, all new installations or major replacements shall meet the applicable specifications or requirements for new vessels.

(3) All davits for lifeboats weighing in excess of 5,000 pounds when fully equipped (but without persons) shall be of the gravity type.

Subpart 192.30—Lifeboat Winches

§ 192.30–1 Application.

(a) The provisions of this subpart, with the exception of § 192.30–90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 192.30–90.

§ 192.30–5 General.

(a) All lifeboat winches shall be of an approved type, constructed in accordance with Subpart 160.015 of Subchapter Q (Specifications) of this chapter.

(b) Where ice conditions are likely to be encountered, suitable covers shall be provided for all lifeboat winches, so fitted over exposed mechanism, that ice formation may be readily broken adrift when necessary to operate the winch.

(c) Where lifeboat winches are used, wire falls shall be employed.

§ 192.30–10 Number and type required.

(a) Lifeboat winches shall be fitted for each set of davits on all vessels in ocean or coastwise service where the height of the deck on which lifeboats are carried exceeds 20 feet from the lightest seagoing draft.

(b) Lifeboat winches shall be used in all cases where gravity type davits are employed.

(c) Lifeboat winches for use with gravity davits shall have grooved drums of such size that there will be only one layer of wire on the drums. Lifeboat winches for use with mechanical davits need not have grooved drums, and may be designed to take more than one layer of wire.

§ 192.30–15 Installation.

(a) Lifeboat winch controls shall be so located that the operator can observe the movement of the lifeboat during the lowering operation. In addition, any electrical controls provided shall meet the requirements of Subpart 111.65 of Subchapter J (Electrical Engineering) of this chapter.

(b) The lead of the falls to the lifeboat winches and length and size of wire shall be in accordance with Subpart 192.33.

§ 192.30–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Except as specifically modified by this paragraph, the requirements of §§ 192.30–5 through 192.30–15 shall be complied with insofar as the number and general type of equipment is concerned.

(2) Existing items of equipment previously approved, but not meeting the applicable specifications or requirements set forth in §§ 192.30–5 through 192.30–15 may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. However, all new installations or major replacements shall meet the applicable specifications or requirements for new vessels.

Subpart 192.33—Blocks and Falls for Lifeboats

§ 192.33–1 Application.

(a) The provisions of this subpart, with the exception of § 192.33–90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 192.33–90.

§ 192.33–5 General.

(a) All blocks, falls, fairleads, padeyes, shackles, links, fastenings, etc., used in connection with lifeboat gear, shall be designed with a minimum factor of safety of six, based on the maximum working load.

(b) Falls shall be of such length that the lifeboat may be lowered to the water with the vessel at its lightest draft, listed 15 degrees either way.

(c) Falls, where exposed and subject to damage or fouling, shall be suitably protected.

(d) Such blocks or other fittings shall be fitted as are necessary to permit the falls to lead fair in all positions of the davits.

(e) Means for lubrication shall be provided for all moving parts of blocks, sheaves, fairleads, etc.

§ 192.33–10 Installations where lifeboat winches are used.

(a) All falls shall be of wire rope.

(b) Wire rope falls of 6 x 19 regular lay filler wire constructed, prelubricated at the factory with suitable neutral wire rope lubricant, shall be accepted as standard. Any other wire rope, superior or equal to this minimum standard may be used if specifically approved.

(c) Not more than two-part falls may be used, except in special cases where three-part falls may be permitted by the Commandant.

(d) The lead sheaves to the drums shall be located so as to provide fleet angles of not more than 8 degrees for grooved drums and not more than 4 degrees for nongrooved drums. By fleet angle is meant the angle included between an imaginary line from the lead sheave perpendicular to the axis of the drum and the line formed by the wire rope when led from the lead sheave to either extremity of the drum.

(e) Sheaves shall have a diameter at the base of the groove at least equal to 12 times the diameter of the wire rope.

§ 192.33–15 Installations where lifeboat winches are not used.

(a) All falls shall be of manila rope or equivalent. Wire rope shall not be used.

(b) All vessels shall be provided with covered tubs, boxes, or reels for the stowage and protection of the falls, and cruciform bitts shall be provided for properly lowering the lifeboats.

(c) There shall be ample clearance between the cheeks of all blocks. The width between the cheeks shall be ½-inch greater than the diameter of new rope if 3¾ inches circumference or greater is used. Blocks for smaller rope shall be designed with proportional clearances.

§ 192.33–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Except as specifically modified by this paragraph, the requirements of §§ 192.33–5 through 192.33–15 as applicable, shall be complied with insofar as the general type of equipment is concerned.

(2) Existing equipment previously approved but not meeting the detailed requirements may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs, alterations, and replacements may be made to the same standards as the original installation. However, all new installations or major replacements shall meet the applicable requirements for new vessels.

Subpart 192.35—Installation of Lifeboats, Davits, and Winches

§ 192.35–1 Application.

(a) The provisions of this subpart apply to all installations, except as set forth in § 196.15–45(c) of this subchapter.

§ 192.35–5 Tests and examinations.

(a) Upon completion of installation of lifeboats, davits, or winches, tests, and examinations as required by this section shall be made to the satisfaction of the inspector before the vessel may be navigated.

(b) The lifeboat shall be swung out from the chocks and lowered to the embarkation deck. At this point the lifeboat shall be loaded with deadweight equivalent to the number of persons allowed (165 pounds per person) together including the weight of the lifeboat. No person shall be permitted in the lifeboat while it is being loaded or lowered. The lifeboat shall then be lowered to the water and disengaged from the falls.

(1) None of the equipment or parts thereof nor deck connections shall show signs of permanent set or excessive deflection.

(2) Mechanical and radial type davits shall be capable of being swung out without lifting the lifeboat, except on small vessels where such requirements are unreasonable or impracticable in the opinion of the Officer in Charge, Marine Inspection.

(3) The falls shall be of sufficient length to lower the lifeboat as required by § 192.33–5(b).

(4) Where lifeboat winches are used, the following additional determinations shall be made:

(i) During lowering, the lifeboat shall be stopped at intervals of approximately 6 feet by the action of the counterweight alone. The counterweight shall be capable of stopping and holding the lifeboat. The brake action shall be smooth, but positive.

(ii) Brakes exposed to the weather shall be tested under the load conditions with the braking surfaces both wet and dry.

(iii) The governor brake shall be capable of controlling the speed of lowering the fully equipped lifeboat with its complement of persons on board to not more than 120 feet per minute. In addition, the speed of lowering of the fully equipped lifeboat without its complement of persons shall not be less than 40 feet per minute.

Subpart 192.40—Life Preservers

§ 192.40–1 Application.

(a) The provisions of this subpart, with the exception of § 192.40–90, apply

to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 192.40–90.

§ 192.40–5 General.

(a) All life preservers shall be of an approved type, constructed in accordance with Subparts 160.002, 160.005, or 160.055 of Subchapter Q (Specifications) of this chapter.

(b) All life preservers on vessels on an international voyage shall be provided with a whistle of the ball type, of corrosion-resistant construction, with a 3-foot lanyard attached, and in good working order. It shall be attached to the life preserver by the lanyard alone without hooks, snaps, clips, etc., and shall extend not less than 15 inches from the life preserver body. While stowed on the life preserver, the whistle lanyard shall be coiled and stopped off.

§ 192.40–10 Number required.

(a) All vessels shall be provided with a life preserver for each person on board. An additional number of life preservers shall be provided for the personnel on watch in the engineroom and pilothouse, and at the bow lookout.

(b) In addition to the life preservers required by paragraph (a) of this section, all vessels on an international voyage shall be provided with approved type life preservers for 5 percent of the persons carried.

(c) When children are carried, a suitable number of children's life preservers shall be provided.

§ 192.40–15 Distribution and stowage.

(a) *Distribution.* (1) Life preservers shall be distributed throughout the quarters for the crew and scientific personnel and other places readily accessible for each person on board. The stowage of the additional number of life preservers required by § 192.40–10 shall be such that they are readily accessible to personnel on watch in the engineroom and pilothouse, and at the bow lookout.

(2) Life preservers stowed overhead shall be so supported that they can be quickly released and distributed. Where life preservers are stowed at a height greater than 7 feet from the deck below, efficient means shall be provided for their immediate release and distribution to be operated by persons standing on the deck.

(3) For vessels on an international voyage and carrying additional life preservers required by § 192.40–10(b), such life preservers shall be stowed in boxes near the lifeboats.

§ 192.40–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Except as specifically modified by this paragraph, the requirements of §§ 192.40–5 through 192.40–15 shall be complied with insofar as the number of items of equipment and the method of stowage is concerned.

(2) Existing items of equipment previously approved, but not meeting the applicable specifications or requirements set forth in §§ 192.40–5 through 192.40–15 may be continued in service so long as they are serviceable and in good condition to the satisfaction of the Officer in Charge, Marine Inspection, except that:

(i) Kapok and fibrous glass life preservers which do not have plastic-covered pad inserts, as required by Subparts 160.002 and 160.005 of Subchapter Q (Specifications) of this chapter shall not be permitted.

(3) All new installations or replacements shall meet the applicable specifications or requirements for new equipment, except that:

(i) Cork and balsa wood life preservers, constructed in accordance with the applicable provisions of Subpart 160.003 or 160.004 and manufactured as approved life preservers prior to July 1, 1965, may be accepted as new or replacement equipment required by this subchapter if such life preservers are serviceable and in good condition to the satisfaction of the Officer in Charge, Marine Inspection, except for vessels on an international voyage.

Subpart 192.43—Ring Life Buoys and Water Lights

§ 192.43–1 Application.

(a) The provisions of this subpart, with the exception of § 192.43–90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 192.43–90.

§ 192.43–5 General.

(a) All ring life buoys shall be of an approved type, constructed in accordance with Subpart 160.009 or 160.050 of Subchapter Q (Specifications) of this chapter.

(b) All water lights shall be of an approved type, constructed in accordance with Subparts 160.012 or 161.001 of Subchapter Q (Specifications) of this chapter.

(c) All self-activating smoke signals shall be of an approved type, constructed in accordance with the requirements of Subpart 160.057 of Subchapter Q (Specifications) of this chapter which shall be capable of producing smoke of a highly visible color for at least 15 minutes.

§ 192.43–10 Number required.

(a) The minimum number of approved 30-inch ring life buoys and the minimum number of which shall have water lights attached, shall be in accordance with Table 192.43–10(a): *Provided,* That unmanned barges are exempt from this section.

TABLE 192.43–10(a)

Length of vessel in feet	Ocean [1]		All services other than ocean [1]	
	Minimum number of ring life buoys	Minimum number of ring life buoys in column 2 which shall have water lights attached	Minimum number of ring life buoys	Minimum number of ring life buoys in column 4 which shall have water lights attached
Column 1	Column 2	Column 3	Column 4	Column 5
Under 100	8	6	2	[illegible]
100 and under 200	8	6	[illegible]	[illegible]
200 and under 300	8	6	6	[illegible]
300 and under 400	12	6	12	[illegible]
400 and under 600	18	9	18	9
600 and under 800	24	12	24	12
800 and over	[illegible]	15	[illegible]	15

[1] Manned barges shall be equipped with 1 ring life buoy at each end of the vessel with water light attached and 15 fathoms of line.

(b) One of the ring life buoys on each side of the vessel shall have secured to it a line at least 15 fathoms in length. On vessels on an international voyage, the line shall be of a buoyant type.

(c) On vessels on an international voyage, at least two of the ring life buoys with water lights attached as required by Table 192.43–10(a) shall also be provided with an approved self-activated smoke signal and shall be capable of quick release from the bridge.

(d) On vessels on an international voyage, the ring life buoys required by this section shall be orange in color.

§ 192.43–15 Distribution and securing.

(a) All ring life buoys shall be placed so as to be readily accessible to the persons on board, and their positions plainly indicated so as to be known to the persons concerned.

(b) The ring life buoys shall always be capable of being cast loose, and shall not be permanently secured in any way.

§ 192.43–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Except as specifically modified by this paragraph, the requirements of §§ 192.43–5 through 192.43–15 shall be complied with insofar as the number of items of equipment and the method of stowage is concerned.

(2) Existing items of equipment previously approved, but not meeting the applicable specifications or requirements set forth in §§ 192.43–5 through 192.43–15 may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. All new installations or replacements shall meet the applicable specifications or requirements in this subpart for new vessels.

Subpart 192.45—Line-Throwing Appliances

§ 192.45–1 Application.

(a) The provisions of this subpart with the exception of § 192.45–90, shall apply to all mechanically propelled vessels in ocean and coastwise service, contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 192.45–90.

§ 192.45–5 General.

(a) Line-throwing appliances of the impulse-projected rocket type, and the equipment auxiliary thereto, shall be of an approved type, constructed in accordance with Subpart 160.040 of Subchapter Q (Specifications) of this chapter. The service use of rockets shall be limited to a period of 4 years from date of manufacture, and replacement of outdated items shall be made at the first port of arrival in the United States where such rockets are available, except that replacement shall be made in all cases within 12 months after the date of expiration.

(b) Line-throwing appliances of the shoulder-gun type, and the equipment auxiliary thereto, shall be of an approved type, constructed in accordance with Subpart 160.031 of Subchapter Q (Specifications) of this chapter.

§ 192.45–10 Type required.

(a) All vessels shall be fitted with an approved line-throwing appliance of the impulse-projected rocket type. However, vessels of less than 500 gross tons may substitute a line-throwing appliance of the shoulder-gun type.

§ 192.45–15 Equipment for line-throwing appliances.

(a) The equipment enumerated in this paragraph shall be carried for impulse-projected rocket type line-throwing appliances. Except as noted, the equipment and the appliance shall be stowed together in a suitable case or box:

(1) Four rockets, two of which shall be of the buoyant type.

(2) Four primer-ejector cartridges.

(3) Four service lines, each of a length not less than that specified in the approval of the appliance carried, of 7/32-inch to 9/32-inch diameter, of flax or manila, and having a breaking strength of at least 500 pounds, to be kept in faking boxes or on reels. These lines may be kept either in the box or case with the remainder of the equipment, or be stowed in an accessible location nearby.

(4) One cleaning brush, one can of oil, and twelve wiping patches.

(5) One set of instructions furnished by the manufacturer.

(6) One auxiliary line, 1,500 feet of 3-inch circumference manila. This line may be kept either in the box or case with the remainder of the equipment or be stowed in an accessible location nearby.

(b) The equipment enumerated in this paragraph shall be carried for shoulder-gun type line-throwing appliances. Except as noted, the equipment and the appliance shall be stowed together in a suitable case or box.

(1) Ten service projectiles.

(2) Twenty-five cartridges.

(3) Four service lines, each not less than 400 feet in length, of 3/8-inch circumference flax or cotton and having a breaking strength of at least 250 pounds, or each not less than 600 feet in length of 1/16-inch or more diameter woven or braided nylon, very flexible, having a breaking strength not less than 140 pounds, or equivalent, to be kept in faking boxes or on reels. These lines may be kept either in the box or case with the remainder of the equipment or be stowed in an accessible location nearby.

(4) One cleaning rod with brush, one can of oil, and twelve wiping patches.

(5) One set of instructions furnished by the manufacturer.

(6) One auxiliary line, 500 feet of 3-inch circumference manila.

§ 192.45–20 Accessibility.

(a) The line-throwing appliance and its equipment shall be kept easily and readily accessible and ready for use. No part of this equipment shall be used for any other purpose.

§ 192.45–25 Service recommendations.

(a) In firing the line-throwing appliances, the operating instructions and safety precautions furnished by the manufacturer should be followed.

§ 192.45–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels in ocean or coastwise service contracted for prior to March 1, 1967, shall meet the requirements set forth in §§ 192.45–5 through 192.45–25. However, if a Lyle gun type line-throwing appliance is already in service on such vessel, it may be continued in use so long as it is in good and serviceable condition, but may not be replaced by a similar installation. Where Lyle guns are used, the following requirements shall be met:

(1) The equipment enumerated in this subparagraph shall be carried for Lyle gun type line-throwing appliances. The equipment and the gun shall be stowed together in a suitable case or box. If the case or box does not meet the requirements of Subpart 160.038 of Subchapter Q (Specifications) of this chapter for portable magazine chest, the powder and primers shall be separately stowed in a chest meeting such requirement.

(i) Six service projectiles.

(ii) Eighteen bags (2½ ounces each) of black powder marked "One-half normal charge of Lyle gun, 2½ ounces black powder" in a nonferrous metal screw-top container.

(iii) One approved firing attachment with accessories consisting of lanyard, wrench, washer to fit between barrel and shoulder of firing attachment, blank plug for screwing into gun when firing attachment is not in place, cartridge extractor, and 25 primers in a watertight metal box.

(iv) Twenty-five paper wads.

(v) Four service lines, each 1,700 feet in length, of 7/32-inch to 9/32-inch diameter flax or manila, and having a breaking strength of at least 500 pounds, to be kept in faking boxes or on reels.

(vi) One ram rod, one wire brush, one can of light petrolatum, and twelve wiping patches.

(vii) One tapered wooden plug for muzzle of gun when not in use.

(viii) One set of instructions furnished by the manufacturer of the gun.

(ix) One auxiliary line, 1,500 feet of 3-inch circumference manila.

(2) Accessibility. Same as § 192.45–20.

Subpart 192.50—Embarkation Aids

§ 192.50–1 Application.

(a) The provisions of this subpart, with the exception of § 192.50–90, shall apply to all vessels, contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 192.50–90.

§ 192.50–5 Ladders.

(a) *General.* (1) All ladders required by this section shall be of an approved type constructed in accordance with Subpart 160.017 of Subchapter Q (Specifications) of this chapter.

(b) *Vessels in ocean, coastwise, or Great Lake service.* (1) All vessels in ocean, coastwise, or Great Lakes service shall have an approved Type II (chain suspension) ladder for each set of lifeboat davits, but existing ladders previously approved by the Coast Guard may be continued in service so long as they are maintained in good condition. Such ladders shall be kept ready and convenient for use on the lifeboat deck, and shall reach from such deck to the vessel's light waterline, no heel assumed.

(2) All ocean and coastwise vessels which normally employ a pilot shall have a ladder for the use of the pilot in addition to the ladders required by subparagraph (1) of this paragraph. Suitable spreaders, a man rope, and a safety line shall be kept readily available for use in conjunction with the pilot ladder whenever circumstances may so require. When used, the ladder shall be secured in a position so that each step rests firmly against the ship's side, and so the pilot can gain safe and convenient access to the ship after climbing not more than 30 feet. Whenever the distance from sea level is more than 30 feet, access from the pilot ladder to the ship shall be by means of an accommodation ladder or other equally safe and convenient means. Arrangements shall be such that the rigging of the ladder and the embarkation and debarkation of the pilot is supervised by a responsible

officer of the ship, and handholds are provided to assist the pilot to pass safely and conveniently from the head of the ladder into the ship and onto the ship's deck. At night a light shining over the side shall be available for use, and the deck at the position where the pilot boards the ship shall be adequately lighted.

§ 192.50–7 Embarkation aids into inflatable liferafts.

(a) Where inflatable liferafts are substituted for lifeboats, unless freeboard at embarkation point is such that embarkation devices are not necessary, suitable arrangements shall be made for embarkation which shall include sufficient ladders or other suitable devices to facilitate embarkation into the inflatable liferafts when waterborne.

§ 192.50–10 Illumination of lifeboat launching operations.

(a) Provisions shall be made on all vessels on an international voyage and all other vessels where the lifeboat deck is more than 30 feet above the light waterline, for readily and continuously available illumination from the vessel of lifeboats when alongside and in process of or immediately after being launched. Details of the illuminating system shall be in accordance with Subchapter J (Electrical Engineering) of this chapter.

§ 192.50–15 Illumination for liferaft stowage areas.

(a) For all vessels on an international voyage, suitable illumination shall be provided for the liferaft stowage areas.

§ 192.50–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Except as specifically modified by this paragraph, the requirements of §§ 192.50–5 through 192.50–15 shall be complied with insofar as the number of items of equipment and the method of stowage is concerned.

(2) Existing items of equipment previously approved, but not meeting the applicable specifications or requirements of §§ 192.50–5 through 192.50–15 may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. All new installations or replacements shall meet the applicable specifications or requirements for new vessels.

(3) The illumination for lifeboat launching operations need not meet the detailed requirements of Subchapter J (Electrical Engineering) of this chapter.

Subpart 192.55—Portable Radio Apparatus

§ 192.55–1 Required on international voyage.

(a) Vessels on an international voyage shall be provided with a portable radio apparatus complying with the requirements of the Federal Communications Commission unless at least one lifeboat on each side of the vessel is fitted with a fixed radio installation. Such portable radio shall be kept in the radioroom, chartroom, or other suitable location ready to be moved to one or other of the lifeboats in the event of an emergency.

Subpart 192.60—Ship's Distress Signals

§ 192.60–1 Application.

(a) The provisions of this subpart shall apply to all manned vessels of 300 gross tons and over as specifically noted.

§ 192.60–5 Vessels in ocean or coastwise service.

(a) All vessels in ocean and coastwise service shall carry within the pilothouse or on the navigator's bridge 12 approved hand-held rocket-propelled parachute red flare distress signals, contained in a portable watertight container, constructed in accordance with Subpart 160.036 of Subchapter Q (Specifications) of this chapter.

(b) The service use of the distress signals shall be limited to a period of 3 years from date of manufacture, and replacement of outdated items shall be made at the first port of arrival in the United States where such distress signals are available, except that replacement shall be made in all cases within 12 months after the date of expiration.

§ 192.60–10 Vessels in Great Lakes service.

(a) All vessels in Great Lakes service shall carry within the pilothouse or on the navigator's bridge, 12 approved hand-held red flare distress signals, contained in a portable watertight container, constructed in accordance with Subpart 160.021 or Subpart 160.023 of Subchapter Q (Specifications) of this chapter.

(b) The service use of distress signals shall be limited to a period of 3 years from date of manufacture, and replacement of outdated items shall be made at the first port of arrival in the United States where such distress signals are available, except that replacement shall be made in all cases with 12 months after the date of expiration.

PART 193—FIRE PROTECTION EQUIPMENT

Subpart 193.01—Application

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193.01–5 Equipment installed but not required.

Subpart 193.05—Fire Detecting and Extinguishing Equipment, Where Required

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193.05–5 Fire main system.
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193.15–25 Discharge outlets.
193.15–30 Alarms.
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Subpart 193.50—Hand Portable Fire Extinguishers and Semiportable Fire Extinguishing Systems, Arrangements and Details

193.50–1 Application.
193.50–5 Classification.
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Subpart 193.60—Fire Axes

193.60–1 Application.
193.60–5 Number required.
193.60–10 Location.

AUTHORITY: The provisions of this Part 193 issued under R.S. 4405, as amended, 4462, as amended, sec. 5, 79 Stat. 424; 46 U.S.C. 375, 416, 445. Interpret or apply R.S. 4417, as amended, 4418, as amended, 4453, as amended, 4488, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, sec. 17, 49 Stat. 166, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended; 46 U.S.C. 391, 392, 435, 481, 395, 363, 526p, 367; E.O. 11239, July 31, 1965, 30 F.R. 9671, 3 CFR, 1965 Supp. Treasury Dept. Orders 120, July 31, 1950, 15 F.R. 6521; CGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–38, Oct. 26, 1959, 24 F.R. 8857; 167–66, Sept. 8, 1965, 30 F.R. 11735.

Subpart 193.01—Application

§ 193.01–1 General.

(a) Except as specifically noted, the provisions of this part shall apply to all vessels.

§ 193.01–5 Equipment installed but not required.

(a) Where fire detecting or extinguishing systems on equipment are not required, but are installed, the system or equipment and its installation shall meet the requirements of this part.

Subpart 193.05—Fire Detecting and Extinguishing Equipment, Where Required

§ 193.05–1 Fire detecting, manual alarm, and supervised patrol systems.

(a) Fire detecting, manual alarm, and supervised patrol systems are not required, but if installed, the systems shall meet the applicable requirements of Part 76 of Subchapter H (Passenger Vessels) of this chapter.

(b) In each compartment containing explosives, and in adjacent compartments if containing stores, there shall be provided a smoke detecting or other suitable type fire detecting system.

§ 193.05–5 Fire main system.

(a) Fire pumps, hydrants, hose, and nozzles shall be installed on all manned vessels.

(b) The arrangements and details of the fire main system shall be as set forth in Subpart 193.10.

§ 193.05–10 Fixed fire extinguishing systems.

(a) Approved fire extinguishing systems shall be installed in those locations delineated in this section.

(b) A fixed carbon dioxide or other approved system shall be installed in all lamp and paint lockers, oil rooms, and similar spaces.

(c) Fire extinguishing systems shall be provided for internal combustion engine installations in accordance with the following:

(1) Enclosed spaces containing gasoline engines shall have fixed carbon dioxide systems.

(2) If a fire extinguishing system is installed to protect an internal combustion or gas turbine installation, the system shall be of the carbon dioxide type.

(3) On vessels of 1,000 gross tons and over, a fixed carbon dioxide system shall be installed in all spaces containing internal combustion or gas turbine main propulsion machinery, auxiliaries with an aggregate power of 1,000 b. hp. or greater, or their fuel oil units, including purifiers, valves, and manifolds.

(d) A fixed carbon dioxide system shall be installed in all chemical storerooms.

(e) On vessels of 1,000 gross tons and over, a fixed carbon dioxide, foam, or water spray system shall be installed in all spaces containing oil fired boilers, either main or auxiliary, or their fuel oil units, valves, or manifolds in the line between the settling tanks and the boilers.

(f) Where an enclosed ventilating system is installed for electric propulsion motors or generators, a fixed carbon dioxide extinguishing system shall be installed in such system.

(g) The arrangements and details of the fixed carbon dioxide extinguishing systems shall be as set forth in Subpart 193.15.

(h) Additional specific requirements for fire extinguishing systems for spaces containing explosives and other dangerous articles or substances are in Part 194 of this subchapter.

§ 193.05–15 Hand portable fire extinguishers and semiportable fire extinguishing systems.

(a) Approved hand portable fire extinguishers and semiportable fire extinguishing systems shall be installed on all manned vessels as set forth in Subpart 193.50.

§ 193.05–20 Sand.

(a) There shall be in each space containing oil fired boilers a metal receptacle containing not less than 10 cubic feet of sand, sawdust impregnated with soda, or other approved dry materials together with a scoop or shaker for distributing the same.

(b) In lieu of the requirements in paragraph (a) of this section, one B–II fire extinguisher may be substituted.

Subpart 193.10—Fire Main System, Details

§ 193.10–1 Application.

(a) The provisions of this subpart, with the exception of § 193.10–90; shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 193.10–1(b).

§ 193.10–5 Fire pumps.

(a) Vessels shall be equipped with independently driven fire pumps in accordance with Table 193.10–5(a).

TABLE 193.10–5(a)

Gross tons		Minimum number of pumps	Hose and hydrant size, inches	Nozzle orifice size, inches	Length of hose, feet
Over	Not over				
----	100	[1] 1	[1] 1½	[1] ¾	[1] 50
100	1,000	1	1½	⅞	50
1,000	1,500	2	1½	⅞	50
1,500	----	2	[2] 2½	[2] ⅞	[2] 50

[1] On vessels of 65 feet in length or less, ¾-inch hose of good commercial grade together with a commercial garden hose nozzle may be used. The pump may be hand operated and the length of hose shall be sufficient to assure coverage of all parts of the vessel.

[2] 75 feet of 1½-inch hose and ⅞-inch nozzel may be used where specified by § 193.10–10(b) for interior locations and 50 feet 1½-inch hose may be used in exterior locations on vessels in other than ocean or coastwise services.

(b) On vessels of 1,000 gross tons and over on an international voyage, each required fire pump, while delivering water through the fire main system at a pressure corresponding to that required by paragraph (c) of this section, shall have a minimum capacity of at least two-thirds of that required for an independent bilge pump. However, in no case shall the capacity of each fire pump be less than that otherwise required by this section.

(c) Each pump shall be capable of delivering water simultaneously from the outlets having the greatest pressure drop from the fire pumps to the nozzles which may not always be the two highest outlets, at a Pitot tube pressure of approximately 50 p.s.i. Where 1½-inch hose is permitted in lieu of 2½-inch hose by footnote 2 of Table 193.10–5(a), the pump capacity shall be determined on the same basis as if 2½-inch hose had been permitted. Where ¾-inch hose is permitted by Table 193.10–5(a), the Pitot tube pressure need be only 35 p.s.i.

(d) Fire pumps shall be fitted on the discharge side with relief valves set to relieve at 25 p.s.i. in excess of the pressure necessary to maintain the requirements of paragraph (c) of this section or 125 p.s.i., whichever is greater. Relief valves may be omitted if the pumps, operating under shutoff conditions, are not capable of developing a pressure exceeding this amount.

(e) Fire pumps shall be fitted with a pressure gage on the discharge side of the pumps.

(f) Fire pumps may be used for other purposes provided at least one of the required pumps is kept available for use on the fire system at all times. Unless specifically approved by the Commandant, no branch lines shall be connected to the fire mains for other than fire and deck wash purposes. Other discharge lines shall lead from a discharge manifold near the fire pumps. In no case shall a pump having connection to an oil line be used as fire pump.

(g) The total area of the pipes leading from a pump shall not be less than the discharge area of the pump.

(h) On vessels with oil fired boilers, either main or auxiliary, or with internal combustion propulsion machinery, where 3 fire pumps are required, they shall be located in separate spaces, and the arrangement, pumps, sea connections, and sources of power shall be such as to insure that a fire in any one space will not put all of the fire pumps out of operation. However, where it is shown to the satisfaction of the Commandant that it is unreasonable or impracticable to meet this requirement due to the size or arrangement of the vessel, or for other reasons, the installation of a total flooding carbon dioxide system may be accepted as an alternate method of extinguishing any fire which would affect the powering and operation for the required fire pumps.

§ 193.10–10 Fire hydrants and hose.

(a) The size of fire hydrants, hose, and nozzles and the length of hose required shall be as noted in Table 193.10–5(a).

(b) In lieu of the 2½-inch hose and hydrants specified in Table 193.10–5(a), on vessels over 1,500 gross tons, the hydrants in interior locations may have siamese connections for 1½-inch hose. In these cases the hose shall be 75 feet in length, and only one hose will be required at each fire station; however, if all such stations can be satisfactorily served with 50-foot lengths, 50-foot hose may be used.

(c) On vessels of 1,000 gross tons and over there shall be at least one shore connection to the fire main available to each side of the vessel in an accessible location. Suitable cutout valves and check valves shall be provided. Suitable adapters also shall be provided for furnishing the vessel's shore connections with couplings mating those on the shore fire lines. Such vessels on an international voyage, shall be provided with at least one international shore connection. Facilities shall be available enabling such a connection to be used on either side of the vessel. The international shore connection shall be in accordance with specification Subpart 162.034 of Subchapter Q (Specifications) of this chapter.

(d) Fire hydrants shall be of sufficient number and so located that any part of the vessel, other than main machinery spaces, may be reached with at least 2 streams of water from separate outlets, at least one of which shall be from a single length of hose. In main machinery spaces, all portions of such spaces shall be capable of being reached by at least 2 streams of water, each of which shall be from a single length of hose from separate outlets; however, this requirement need not apply to shaft alleys containing no assigned space for the stowage of combustibles. Fire hydrants shall be numbered as required by § 196.37–15 of this subchapter.

(e) All parts of the fire main located on exposed decks shall either be protected against freezing or be fitted with cutout valves and drain valves so that the

entire exposed parts of such piping may be shut off and drained in freezing weather. Except when closed to prevent freezing, such valves shall be sealed open.

(f) The outlet at the fire hydrant shall be limited to any position from the horizontal to the vertical pointing downward, so that the hose will lead horizonally or downward to minimize the possibility of kinking.

(g) Each fire hydrant shall be provided with a single length of hose with nozzle attached and a spanner. A suitable hose rack or other device shall be provided for the proper stowage of the hose. If the hose is not stowed in the open or behind glass so as to be readily seen, the enclosures shall be marked in accordance with § 196.37–15 of this subchapter.

(h) Fire hose shall be connected to the outlets at all times. However, as open decks where no protection is afforded to the hose in heavy weather, the hose may be temporarily removed from the hydrant and stowed in an accessible nearby location.

(i) Hose nozzles shall be as follows:

(1) All nozzles shall be of good grade bronze or equivalent metal.

(2) Where smooth bore type nozzles are used, they shall have an orifice of the size indicated in Table 193.10–5(a).

(3) Where combination solid stream and water spray fire hose nozzles are used, they shall be approved type and shall be constructed in accordance with Subpart 162.027 of Subchapter Q (Specification) of this chapter. The detachable applictaor shall be stowed adjacent to the fire hydrant, except where combination nozzles are not required, in which case the applicator may be stowed at the discretion of the master.

(4) Except as noted in subparagraphs (5) and (6) of this paragraph, all hose nozzles shall be of either the smooth bore type or the approved type combination nozzle.

(5) On all vessels of 1,000 gross tons and over, the hose attached to the hydrants in propulsion machinery spaces containing oil fired boilers, internal combustion machinery, or oil fuel units shall be fitted with an approved combination nozzle. The applicator shall be not more than 6 feet in length.

(6) Where ¾-inch hose is permitted by Table 193.10–5(a), a good commercial grade garden hose nozzle or equivalent will be accepted.

(7) Where approved combination nozzles are used, but are not required, the applicators with low velocity fog spray heads and the self-cleaning strainers may be fitted, but will not be required.

(j) Firehose shall not be used for any other purpose than fire extinguishing, drills, and testing.

(k) Fire hydrants, nozzles, and other fittings shall have threads to accommodate the hose connections noted in this paragraph. Firehose and couplings shall be as follows:

(1) Couplings shall be of brass, bronze, or other equivalent metal. National Standard firehose coupling threads shall be used for the 1½-inch and 2½-inch sizes, i.e., 9 threads per inch for 1½-inch hose and 7½ threads per inch for 2½-inch hose.

(2) Unlined hose shall not be used in the machinery spaces.

(3) Where ¾-inch hose is permitted by Table 193.10–5(a), the hose and couplings shall be of good commercial grade.

(4) All lined and unlined hoses shall be of firehose quality in conformance with Underwriters' Laboratories, Inc., Standard 18 or 19, or Federal Specification JJ–H–571 or ZZ–H–451a. Hose which bears the label of Underwriters' Laboratories, Inc., as inspected lined or unlined firehose will be accepted as conforming to this requirement.

§ 193.10–15 Piping.

(a) All piping, valves, and fittings, shall meet the applicable requirements of Subchapter F (Marine Engineering) of this chapter.

(b) All distribution cut-off valves shall be marked as required by § 196.37–10 of this subchapter.

(c) For vessels on an international voyage, the diameter of the fire main shall be sufficient for the effective distribution of the maximum required discharge from two fire pumps operating simultaneously. This requirement is in addition to § 193.10–5(c). The discharge of this quantity of water through hoses and nozzles at a sufficient number of adjacent hydrants shall be at a minimum Pitot tube pressure of approximately 50 pounds per square inch.

§ 193.10–90 Installations contracted for prior to March 1, 1967.

(a) Installations contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Except as specifically modified by this paragraph, the requirements of §§ 193.10–5 through 193.10–15 shall be complied with insofar as the number and general type of equipment is concerned.

(2) Existing equipment previously approved, but not meeting the applicable requirements of §§ 193.10–5 through 193.10–15 may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs, alteration, and replacements may be permitted to the same standards as the original installations. However, all new installations or major replacements shall meet the applicable requirements in this subpart for new installations.

(3) The general requirements of § 193.10–5 (c) through (g), § 193.10–10 (d) through (i), and § 95.10–15 shall be complied with insofar as is reasonable and practicable.

Subpart 193.15—Carbon Dioxide Extinguishing Systems, Details

§ 193.15–1 Application.

(a) The provisions of this subpart shall apply to all new installations contracted for on or after March 1, 1967.

(b) Installations contracted for prior to March 1, 1967, shall meet the requirements of § 193.15–90.

(c) The requirements of this subpart are based on a "high pressure system," i.e., one in which the carbon dioxide is stored in liquid form at atmospheric temperature. Details for "low pressure systems," i.e., those in which the carbon dioxide is stored in liquid form at a continuously controlled low temperature, may be specifically approved by the Commandant where it is demonstrated that a comparable degree of safety and fire extinguishing ability is achieved.

§ 193.15–5 Quantity, pipe sizes, and discharge rates.

(a) *General.* The amount of carbon dioxide required for each space shall be as determined by paragraphs (b) through (e) of this section.

(b) *Total available supply.* A separate supply of carbon dioxide need not be provided for each space protected. The total available supply shall be at least sufficient for the space requiring the greatest amount.

(c) *Enclosed ventilation systems for rotating electrical propulsion equipment.* (1) The number of pounds of carbon dioxide required for the initial charge shall be equal to the gross volume of the system divided by 10 for systems having a volume of less than 2,000 cubic feet, and divided by 12 for systems having a volume of 2,000 cubic feet or more.

(2) In addition to the amount required by subparagraph (1) of this paragraph there shall be sufficient carbon dioxide available to permit delayed discharges of such quantity as to maintain at least a 25-percent concentration until the equipment can be stopped. If the initial discharge is such as to achieve this concentration until the equipment is stopped, no delayed discharge need be provided.

(3) The piping for the delayed discharge shall not be less than ½-inch standard pipe, and no specific discharge rate need be applied to such systems. On small systems, this pipe may be incorporated with the initial discharge piping.

(4) The piping for the initial charge shall be in accordance with Table 193.15–5(d)(4), and the discharge of the required amount shall be completed within 2 minutes.

(d) *Machinery spaces, paint lockers, tanks, chemical storerooms, and similar spaces.* (1) Except as provided in subparagraph (3) of this paragraph, the number of pounds of carbon dioxide required for each space shall be equal to the gross volume of the space divided by the appropriate factor noted in Table 193.15–5(d)(1). If fuel can drain from the compartment being protected to an adjacent compartment, or if the compartments are not entirely separate, the requirements for both compartments shall be used to determine the amount of carbon dioxide to be provided. The carbon dioxide shall be arranged to discharge into both such compartments simultaneously.

TABLE 193.15-5(d)(1)

Gross volume of compartment, cubic feet		Factor
Over	Not over	
	500	15
500	1,600	16
1,600	4,500	18
4,500	50,000	20
50,000		22

(2) For the purpose of the requirements of this paragraph, the volume of the machinery space shall be taken as exclusive of the normal machinery casing unless the boiler, internal combustion machinery, or fuel oil installations extend into such space, in which case the volume shall be taken to the top of the casing or the next material reduction in casing area, whichever is lower. "Normal machinery casing" and "material reduction in casing area" shall be defined as follows:

(i) By "normal machinery casing" shall be meant a casing the area of which is not more than 40 percent of the maximum area of the machinery space.

(ii) By "material reduction in casing area" shall be meant a reduction to at least 40 percent of the casing area.

(3) For vessels on an international voyage contracted for on or after May 26, 1965, the amount of carbon dioxide required for a space containing propulsion boilers or internal combustion propulsion machinery shall be as given by subparagraphs (1) and (2) of this paragraph or by dividing the entire volume, including the casing, by a factor of 25, whichever is the larger.

(4) Branch lines to the various spaces shall be as noted in Table 193.15-5(d)(4).

TABLE 193.15-5(d)(4)

Maximum quantity of carbon dioxide required, pounds	Minimum pipe size, inches	Maximum quantity of carbon dioxide required, pounds	Minimum pipe size, inches
100	1½	2,500	2½
225	¾	4,450	3
300	1	7,100	3½
600	1¼	10,450	4
1,000	1½	15,000	4½
2,450	2		

(5) Distribution piping within the space shall be proportioned from the supply line to give proper distribution to the outlets without throttling.

(6) The number, type, and location of discharge outlets shall be such as to give a uniform distribution throughout the space.

(7) The total area of all discharge outlets shall not exceed 85 percent nor be less than 35 percent of the normal cylinder outlet area or the area of the supply pipe, whichever is smaller. The nominal cylinder outlet area in square inches shall be determined by multiplying the factor 0.0022 by the number of pounds of carbon dioxide required, except that in no case shall this outlet area be less than 0.110 square inch.

(8) The discharge of at least 85 percent of the required amount of carbon dioxide shall be complete within 2 minutes.

§ 193.15-10 Controls.

(a) Except as noted in § 193.15-20(b), all controls and valves for the operation of the system shall be outside the space protected and shall not be located in any space that might be cut off or made inaccessible in the event of fire in any of the spaces protected.

(b) If the same cylinders are used to protect more than one hazard, a manifold with normally closed stop valves shall be used to direct the carbon dioxide into the proper space. If cylinders are used to protect only one hazard, a normally closed stop valve shall be installed between the cylinders and the hazard except for systems of the type indicated in § 193.15-5(d) which contain not more than 300 pounds of carbon dioxide.

(c) One of the stations controlling the system for the main machinery space and the chemical storerooms shall be located as convenient as practicable to one of the main escapes from these spaces. All control stations and the individual valves and controls shall be marked as required by §§ 196.37-10 and 196.37-13 of this subchapter.

(d) Systems of the type indicated in § 193.15-5(d) shall be actuated by one control operating the valve to the space and a separate control releasing at least the required amount of carbon dioxide. These two controls shall be located in a box or other enclosure clearly identified for the particular space. Those systems installed without a stop valve shall be operated by one control releasing at least the required amount of carbon dioxide.

(e) Where provisions are made for the simultaneous release of a given amount of carbon dioxide by operation of a remote control, provisions shall also be made for manual control at the cylinders. Where gas pressure from pilot cylinders is used as a means for releasing the remaining cylinders, not less than two pilot cylinders shall be used for systems consisting of more than two cylinders. Each of the pilot cylinders shall be capable of manual control at the cylinder, but the remaining cylinders need not be capable of individual manual control.

(f) Systems of the type indicated in § 193.15-5(d), other than systems for tanks, which are of more than 300 pounds of carbon dioxide, shall be fitted with an approved delayed discharge so arranged that the alarm will be sounded for at least 20 seconds before the carbon dioxide is released into the space. Such systems of not more than 300 pounds of carbon dioxide shall also have a similar delayed discharge, except for those systems for tanks and for spaces which have a suitable horizontal escape.

(g) All distribution valves and controls shall be of an approved type. All controls shall be suitably protected.

(h) Complete but simple instructions for the operation of the system shall be located in a conspicuous place at or near the releasing control device.

(i) If the space or enclosure containing the carbon dioxide supply for controls is to be locked, a key to the space or enclosure shall be in a break-glass-type box conspicuously located adjacent to the opening.

§ 193.15-15 Piping.

(a) The piping, valves, and fittings shall have a bursting pressure of not less than 6,000 pounds per square inch.

(b) All piping, in nominal sizes not over ¾ inch shall be at least Schedule 40 (standard weight) and in nominal sizes over ¾ inch, shall be at least Schedule 80 (extra heavy).

(c) All piping valves, and fittings of ferrous materials shall be protected inside and outside against corrosion unless specifically approved otherwise by the Commandant.

(d) A pressure relief valve or equivalent set to relieve between 2,400 and 2,800 pounds per square inch shall be installed in the distribution manifold or such other location as to protect the piping in the event that all branch line shutoff valves are closed.

(e) All dead-end lines shall extend at least 2 inches beyond the last orifice and shall be closed with cap or plug.

(f) All piping, valves, and fittings shall be securely supported, and where necessary, protected against injury.

(g) Drains and dirt traps shall be fitted where necessary to prevent the accumulation of dirt or moisture. Drains and dirt traps shall be located in accessible locations where possible.

(h) Piping shall be used for no other purpose except that it may be incorporated with the fire-decting system.

(i) Piping passing through living quarters shall not be fitted with drains or other openings within such spaces.

(j) Installation test requirements are:

(1) Upon completion of the piping installation, and before the cylinders are connected, a pressure test shall be applied as set forth in this paragraph. Only carbon dioxide or other inert gas shall be used for this test.

(2) The piping from the cylinders to the stop valves in the manifold shall be subjected to a pressure of 1,000 pounds per square inch. With no additional gas being introduced to the system, it shall be demonstrated that the leakage of the system is such as not to permit a pressure drop of more than 150 pounds per square inch per minute for a 2-minute period.

(3) The individual branch lines to the various spaces protected shall be subjected to a test similar to that described in the preceding subparagraph with the exception that the pressure used shall be 600 pounds per square inch in lieu of 1,000 pounds per square inch. For the purpose of this test, the distribution piping shall be capped within the space protected at the first joint ahead of the nozzles.

(4) In lieu of the tests prescribed in the preceding subparagraphs in this paragraph, small independent systems protecting spaces such as emergency generator rooms, lamp lockers, chemical storerooms, etc., may be tested by blowing out the piping with air at a pressure of at least 100 pounds per square inch.

§ 193.15–20 Carbon dioxide storage.

(a) Except as provided in paragraph (b) of this section, the cylinders shall be located outside the spaces protected, and shall not be located in any space that might be cut off or made inaccessible in the event of a fire in any of the spaces protected.

(b) Systems of the type indicated in paragraph 193.15–5(d), consisting of not more than 300 pounds of carbon dioxide, may have cylinders located within the space protected. If the cylinder stowage is within the space protected, the system shall be arranged in an approved manner to be automatically operated by a heat actuator within the space in addition to the regular remote and local controls.

(c) The space containing the cylinders shall be properly ventilated and designed to preclude an anticipated ambient temperature in excess of 130° F.

(d) Cylinders shall be securely fastened and supported, and where necessary, protected against injury.

(e) Cylinders shall be so mounted as to be readily accessible and capable of easy removal for recharging and inspection. Provisions shall be available for weighing the cylinders.

(f) Where subject to moisture, cylinders shall be so installed as to provide a space of at least 2 inches between the flooring and the bottom of the cylinders.

(g) Cylinders shall be mounted in an upright position or inclined not more than 30 degrees from the vertical. However, cylinders which are fitted with flexible or bent siphon tubes may be inclined not more than 80 degrees from the vertical.

(h) Where check valves are not fitted on each independent cylinder discharge, plugs or caps shall be provided for closing outlets when cylinders are removed for inspection or refilling.

(i) All cylinders used for storing carbon dioxide shall be fabricated, tested, and marked in accordance with the regulations of the Interstate Commerce Commission as noted in § 147.04–1 of Subchapter N (Dangerous Cargoes) of this chapter.

§ 193.15–25 Discharge outlets.

(a) Discharge outlets shall be of an approved type.

§ 193.15–30 Alarms.

(a) Space normally accessible to persons on board while the vessel is being navigated which are protected by a carbon dioxide extinguishing system and are required to be fitted with a delayed discharge system other than paint and lamp lockers and similar small spaces, shall be fitted with an approved audible alarm which will be automatically sounded when the carbon dioxide is admitted to the space. The alarm shall be conspicuously and centrally located and shall be marked as required by § 196.37–9 of this subchapter. Such alarms shall be so arranged as to sound during the 20-second delay period prior to the discharge of carbon dioxide into the space, and the alarm shall depend on no source of power other than the carbon dioxide.

§ 193.15–35 Enclosure openings.

(a) Where mechanical ventilation as provided for spaces which are protected by carbon dioxide extinguishing systems provisions shall be made so that the ventilation system is automatically shut down with the operation of the system to that space.

(b) Where natural ventilation is provided for spaces protected by a carbon dioxide extinguishing system, provisions shall be made for easily and effectively closing off the ventilation.

(c) Means shall be provided for closing all other openings to the space protected from outside such space. In this respect, relatively tight doors, shutters, or dampers shall be provided for openings in the lower portion of the space. The construction shall be such that openings in the upper portion of the space can be closed off either by permanently installed means or by the use of canvas or other material which is normally carried by the vessel.

§ 193.15–40 Pressure relief.

(a) Where necessary, relatively tight compartments such as refrigeration spaces, paint lockers, etc., shall be provided with suitable means for relieving excessive pressure accumulating within the compartment when the carbon dioxide is injected.

§ 193.15–90 Installations contracted for prior to March 1, 1967.

(a) Installations contracted for prior to March 1, 1967 shall meet the following requirements:

(1) Existing arrangements, materials, and facilities previously approved shall be considered satisfactory so long as they meet the minimum requirements of this paragraph and they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs, alterations, and replacements may be permitted to the same standards as the original installations. However, all new installations or major replacements shall meet the applicable requirements in this subpart for new installations.

(2) The details of the systems shall be in general agreement with §§ 193.15–5 through 193.15–40 insofar as is reasonable and practicable, with the exception of § 193.15–5(d) (1), (2), and (4), covering machinery spaces, etc., which systems may be installed in accordance with subparagraphs (3) through (6) of this paragraph.

(3) In boilerrooms, the bilges shall be protected by a system discharging principally below the floorplates. Perforated pipe may be used in lieu of discharge nozzles for such systems. The number of pounds of carbon dioxide shall be equal to the gross volume of the boilerroom taken to the top of the boilers divided by 36. In the event of an elevated boilerroom which drains to the machinery space, the system shall be installed in the engineroom bilge and the gross volume shall be taken to the flat on which the boilers are installed.

(4) In machinery spaces where main propulsion internal combustion machinery is installed, the number of pounds of carbon dioxide required shall be equal to the gross volume of the space taken to the under side of the deck forming the hatch opening divided by 22.

(5) In miscellaneous spaces other than cargo or main machinery spaces the number of pounds of carbon dioxide required shall be equal to the gross volume of the space divided by 22.

(6) Branch lines to the various spaces other than cargo and similar spaces shall be as noted in Table 193.15–90 (a)(6). This table is based on cylinders having discharge outlets and siphon tubes of ⅜-inch diameter.

TABLE 193.15–90(a)(6)

Number of cylinders		Nominal pipe size, inches
Over	Not over	
----	2	½—standard.
2	4	¾—standard.
4	6	1—extra heavy.
6	12	1¼—extra heavy.
12	16	1½—extra heavy.
16	27	2—extra heavy.
27	39	2½—extra heavy.
39	60	3—extra heavy.
60	80	3½—extra heavy.
80	104	4—extra heavy.
104	165	5—extra heavy.

Subpart 193.50—Hand Portable Fire Extinguishers and Semiportable Fire Extinguishing Systems, Arrangements and Details

§ 193.50–1 Application.

(a) The provisions of this subpart, with the exception of § 193.50–90, shall apply to all vessels other than unmanned barges, contracted for on or after March 1, 1967.

(b) All vessels other than unmanned barges contracted for prior to March 1, 1967, shall meet the requirements of § 193.50–90.

(c) All unmanned barges are exempted from the requirements in this subpart. However, if such barges carry on board hand portable fire extinguishers and semiportable fire extinguishing systems, then such equipment shall be in accordance with this subpart for manned barges.

§ 193.50–5 Classification.

(a) Hand portable fire extinguishers and semiportable fire extinguishing systems shall be classified by a combination letter and number symbol. The letter indicating the type of fire which the unit could be expected to extinguish and the number indicating the relative size of the unit.

(b) The types of fire will be designated as follows:

(1) "A" for fires in ordinary combustible materials where the quenching and cooling effects of quantities of water, or solutions containing large percentages of water, are of first importance.

(2) "B" for fires in flammable liquids, greases, etc., where a blanketing effect is essential.

(3) "C" for fires in electrical equipment where the use of nonconducting extinguishing agent is of first importance.

(c) The number designations for size will start with "I" for the smallest to "V" for the largest. Sizes I and II are considered hand portable fire extinguishers and sizes III, IV, and V are considered semiportable fire extinguishing systems which shall be fitted with suitable hose and nozzle or other practicable means so that all portions of the space concerned may be covered. Examples of size graduations for some of the typical hand portable and semiportable fire extinguishing systems are set forth in Table 193.50–5(c).

TABLE 193.50-5(c)

Classification		soda-acid and water, gallons	Foam, gallons	Carbon dioxide, pounds	Dry chemical, pounds
Type	Size				
A	II	2½	2½		
B	I		1½	4	2
B	II		2½	15	10
B	III		12	35	20
B	IV		20	50	30
B	V		40	100	50
C	I			8	2
C	II			15	10

(d) All hand portable fire extinguishers and semiportable fire extinguishing systems shall have permanently attached thereto a metallic nameplate giving the name of the item, the rated capacity in gallons, quarts, or pounds, the name and address of the person or firm for whom approved, and the identifying mark of the actual manufacturer.

(e) Vaporizing liquid type fire extinguishers containing carbon tetrachloride or chlorobromomethane or other toxic vaporizing liquids shall not be permitted.

§ 193.50–10 Location.

(a) Approved hand portable fire extinguishers and semiportable fire extinguishing systems shall be installed in accordance with Table 193.50–10(a). The location of the equipment shall be to the satisfaction of the Officer in Charge, Marine Inspection. Nothing in this paragraph shall be construed as limiting the Officer in Charge, Marine Inspection, from requiring such additional equipment as he deems necessary for the proper protection of the vessel.

TABLE 193.50–10(a)—HAND PORTABLE FIRE EXTINGUISHER AND SEMIPORTABLE FIRE EXTINGUISHING SYSTEMS

Space	Classification (see § 193.50–5)	Quantity and location
Safety Areas [1]		
Wheelhouse or fire control room		None required.
Stairway and elevator enclosures		Do.
Communicating corridors	A–II	1 in each main corridor not more than 150 feet apart. (May be located in stairways.)
Lifeboat embarkation and lowering stations		None required.
Radio room	C–I [2]	2 in vicinity of exit.[2]
Accommodations [1]		
Staterooms, toilet spaces, public spaces, offices, lockers, isolated storerooms, and pantries, open decks, etc.		None required.
Service spaces [1]		
Galleys	B–II or C–II	1 for each 2,500 square feet or fraction thereof suitable for hazards involved.
Paint and lamp rooms	B–II	1 outside space in vicinity of exit.
Accessible baggage, mail, and specie rooms, and storerooms.	A–II	1 for each 2,500 square feet or fraction thereof located in vicinity of exits, either inside or outside the spaces.
Carpenter shop and similar spaces	A–II	1 outside the space in vicinity of exit.
Machinery spaces		
Coal-fired boilers: Bunker and boiler space		None required.
Oil-fired boilers: Spaces containing oil-fired boilers, either main or auxiliary, or their fuel-oil units.	B–II B–V	2 required.[3] 1 required.[4]
Internal combustion or gas turbine propelling machinery spaces.	B–II B–III	1 for each 1,000 brake horsepower, but not less than 2 nor more than 6.[5] 1 required.[6 7]
Electric propulsive motors or generators of open type.	C–II	1 for each propulsion motor or generator unit.
Enclosed ventilating systems for motors and generators of electric propelling machinery.		None required.
Auxiliary spaces:		
Internal combustion gas turbine	B–II	1 outside the space in vicinity of exit.[7]
Electric emergency motors or generators	C–II	1 outside the space in vicinity of exit.[8]
Steam		None required.
Trunks to machinery spaces		Do.
Fuel tanks		Do.
Scientific spaces		
Chemistry laboratory Scientific laboratory	C–II	1 dry chemical and 1 carbon dioxide for each 300 square feet or fraction thereof, with one (1) of each kind located in the vicinity of the exit.
Chemical storeroom	C–II	Same as for the chemistry laboratory.

[1] Two B–I hand portable fire extinguishers may be substituted for 1 B–II.
[2] For vessels on an international voyage, substitute 1 C–II in vicinity of exit.
[3] Vessels of less than 1,000 gross tons require 1.
[4] Vessels of less than 1,000 gross tons may substitute 1 B–IV.
[5] Only 1 required for motorboats.
[6] If oil burning donkey boiler fitted in space, the B–V previously required for the protection of the boiler may be substituted. Not required where a fixed carbon dioxide system is installed.
[7] Not required on vessels of less than 300 gross tons if fuel has a flash-point higher than 110° F.
[8] Not required on vessels of less than 300 gross tons.

(b) Semiportable fire extinguishing systems shall be located in the open so as to be readily seen.

(c) If hand portable fire extinguishers are not located in the open or behind glass so that they may be readily seen, they may be placed in enclosures together with the firehose, provided such enclosures are marked as required by § 196.37–15 of this subchapter.

(d) Hand portable fire extinguishers and their stations shall be numbered in accordance with § 196.37–15 of this subchapter.

(e) Hand portable or semiportable extinguishers, which are required on their nameplates to be protected from freezing, shall not be located where freezing temperatures may be expected.

§ 193.50–15 Spare charges.

(a) For all vessels spare charges shall be carried for at least 50 percent of each size and each variety, i.e., foam, soda-acid, carbon dioxide, etc., of hand portable fire extinguishers required by § 193.50–10(a). However, if the unit is of such variety that it cannot be readily recharged by the vessel's personnel, one spare unit of the same classification shall be carried in lieu of spare charges for all such units of the same size and variety.

(b) Spare charges shall be so packaged as to minimize the hazards to personnel while recharging the units. Acid shall be contained in a Crown stopper type of bottle.

§ 193.50–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Except as specifically modified by this paragraph, the requirements of §§ 193.50–5 through 193.50–15 shall be complied with insofar as the number and general type of equipment is concerned.

(2) Existing installations previously approved, but not meeting the applicable requirements of §§ 193.50–5 through 193.50–15 may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection, and they are in general agreement with the degree of safety prescribed by Table 193.50–15(a). Minor modifications may be made to the same standard as the original installation: *Provided*, That in no case will a greater departure from the standards of Table 193.50–15(a) be permitted than presently exists.

(3) All new equipment and installations shall meet the applicable requirements in this subpart for new vessels.

Subpart 193.60—Fire Axes

§ 193.60–1 Application.

(a) The provisions of this subpart shall apply to all vessels other than unmanned barges.

(b) Unmanned barges are exempted from the requirements in this subpart. However, if such barges carry on board fire axes, then such equipment shall be in accordance with this subpart for manned barges.

§ 193.60–5 Number required.

(a) All vessels shall carry at least the minimum number of fire axes as set forth in Table 193.60–5(a). Nothing in this paragraph shall be construed as limiting the Officer in Charge, Marine Inspection, from requiring such additional fire axes as he deems necessary for the proper protection of the vessel.

TABLE 193.60–5(a)

Gross tons		Number of axes
Over	Not over	
	30	1
50	200	2
200	500	4
500	1000	6
1000		8

§ 193.60–10 Location.

(a) Fire axes shall be distributed throughout the spaces available to persons on board so as to be most readily available in the event of emergency.

(b) If fire axes are not located in the open, or behind glass, so that they may be readily seen, they may be placed in enclosures together with the firehose, provided such enclosures are marked as required by § 196.37–15 of this subchapter.

PART 194—HANDLING, USE AND CONTROL OF EXPLOSIVES AND OTHER DANGEROUS ARTICLES

Subpart 194.01—Application

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194.01–1 General.

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Subpart 194.10—Magazines

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Subpart 194.20—Chemical Stores and/or Storerooms

Sec.
194.20–1 General.
194.20–3 Responsibility.
194.20–5 Ventilation.
194.20–7 Fire protection.
194.20–9 Storage.
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194.20–19 Piping and electrical requirements.

Subpart 194.90—Vessels Contracted for Prior to March 1, 1967

194.90–1 Requirements.

AUTHORITY: The provisions of this Part 194 issued under R.S. 4405, as amended, 4462, as amended, sec. 5, 79 Stat. 424; 46 U.S.C. 375, 416, 445. Interpret or apply R.S. 4417, as amended, 4418, as amended, 4453, as amended, 4472, as amended, 4488, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended; 46 U.S.C. 391, 392, 435, 170, 481, 395, 363, 367; E.O. 11239, July 31, 1965, 30 F.R. 9671, 3 CFR, 1965 Supp. Treasury Dept. Orders 120, July 31, 1950, 15 F.R. 6521; CGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–38, Oct. 26, 1959, 24 F.R. 8857; 167–66, Sept. 8, 1965, 30 F.R. 11735.

Subpart 194.01—Application

§ 194.01–1 General.

(a) The provisions of this part, with the exception of Subpart 194.90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of Subpart 194.90.

Subpart 194.05—Stowage and Marking

§ 194.05–1 General.

(a) The master shall be held responsible for and shall require the proper handling, stowage, and marking of all chemical stores and reagents.

(b) Chemical stores shall be stowed in a chemical storeroom in approved drums, barrels, or other packages, properly marked and labeled, as prescribed by Part 146 of Subchapter N (Dangerous Cargoes) of this chapter for the specific commodities, except that those chemical stores excluded from the storeroom by §§ 194.20–15 and 194.20–17, and those chemical stores not desired to be located in a chemical storeroom, shall be stored in accordance with the appropriate provisions of Part 146 insofar as such regulations apply to cargo vessels.

(c) Ships' stores shall be regulated in accordance with the appropriate provisions of Part 147 of Subchapter N (Dangerous Cargoes) of this chapter.

§ 194.05–3 Chemical stores.

(a) Chemical stores which possess one or more of the following properties shall be classed, marked, and labeled in accordance with Subchapter N (Dangerous Cargoes) of this chapter as follows:

(1) Explosives, in accordance with Subpart 146.20.

(2) Flammable liquids, in accordance with Subpart 146.21.

(3) Flammable solids, in accordance with Subpart 146.22.

(4) Oxidizing materials, in accordance with Subpart 146.22.

(5) Corrosive liquids, in accordance with Subpart 146.23.

(6) Compressed gasses, in accordance with Subpart 146.24.

(7) Poisonous articles, in accordance with Subpart 146.25.

(8) Combustible liquids, in accordance with Subpart 146.26.

(9) Hazardous articles, in accordance with Subpart 146.27.

(b) Substances for use in the chemistry laboratory, or to be stored in the chemical storeroom and generally covered under paragraph (a) of this section but not specifically listed by name in § 146.04–5 must be approved by the Commandant prior to being carried on board a vessel.

§ 194.05–5 Chemicals in the chemistry laboratory.

(a) Chemical stores once removed from the approved shipping container and in small working quantities in the chemistry laboratory as reagents need not be marked or labeled as required by Part 146 of Subchapter N (Dangerous Cargoes) of this chapter. Reagent containers in the laboratory shall be marked to show at least the following:

(1) Common chemical name.

(2) Hazards, if any; e.g., flammable, poison, etc.

(b) In the interest of facilitating scientific activities, no restrictions are intended which will limit the variety of chemicals which may be used in the chemical laboratory. With the knowledge and approval of the master, the laboratory supervisor may be responsible for stowage and use of materials within the laboratory and chemical storeroom.

(c) Reagent containers shall be properly secured against shifting and spillage. Insofar as practical all reagents shall be stowed in suitable, unbreakable containers.

§ 194.05–7 Explosives—Detail requirements.

(a) Class A explosives and blasting caps, except as otherwise provided by this subpart, shall be carried in magazines specifically fitted for that purpose as described in Subpart 194.10. The Class A explosives magazine requirements of § 146.09–1 through 146.09–6 of Subchapter N (Dangerous Cargoes) of this chapter, shall apply only to those vessels already so fitted under the provisions of Subpart 146.90.

(b) Military explosives shall be identified by their appropriate Interstate Commerce Commission classification.

(c) (1) Compatibility of magazine stowage shall be in accordance with § 146.20–90 of Subchapter N (Dangerous Cargoes) of this chapter.

(2) Magazine chests, magazine vans, and deck stowage areas shall be separated by a distance of at least 25 feet if their contents are incompatible with each other.

(d) On deck stowage of unfused depth charges or other unfused case type military explosives is authorized as follows:

(1) Stowage shall be in a location protected from boarding seas.

(2) Stowage shall be protected from direct exposure to the sun by overhead decks, awnings, or tarpaulins. Decks shall be constructed of incombustible materials; awnings and tarpaulins shall be fire-resistant and/or flame proof fabric.

(3) Items shall be properly secured by using existing vessel structures such as bulwarks, hatch coamings, shelter deck and poop bulkheads as part boundaries and effectively closing in the items by fitting angle bar closing means secured by bolting to clips or other parts of the ship's structure. Lashing of deck stowage is permitted provided eye pads or other suitable means are fitted to secure such lashings and provided the individual items are of such a configuration as to prevent slippage of the lashings. Shoring and dunnage may be used as necessary to further facilitate the security of the stowage.

(4) Stowage area shall be selected so as to provide for safe access to all internal spaces and to all parts of the deck required to be used in navigation and working of the vessel. Stowage shall not be on or under the bridge, or navigating deck, or within a distance, in a horizontal plane, of 25 feet of an operating or embarkation point of any lifeboat or raft.

§ 194.05–9 Flammable liquid chemical stores—Detail requirements.

(a) Flammable liquids as chemical stores and reagents are governed by Subparts 194.15 and 194.20.

(b) Other flammable liquids are regulated by the appropriate portions of Subpart 146.21 or Part 147 of Subchapter N (Dangerous Cargoes) of this chapter.

§ 194.05–11 Flammable solids and oxidizing materials—Detail requirements.

(a) Flammable solids and oxidizing materials used as chemical stores and reagents are governed by Subparts 194.15 and 194.20.

(b) Oxidizing materials used as blasting agents are regulated by the appropriate portions of Subpart 146.22 of Subchapter N (Dangerous Cargoes) of this chapter.

§ 194.05–13 Corrosive liquids as chemical stores—Detail requirements.

(a) Corrosive liquids as chemical stores and reagents are governed by Subparts 194.15 and 194.20.

(b) Other corrosive liquids are regulated by the appropriate portions of Subpart 146.23 or Part 147 of Subchapter N (Dangerous Cargoes) of this chapter.

§ 194.05–15 Compressed gases as chemical stores—Detail requirements.

(a) Compressed gases as chemical stores and reagents are governed by Subparts 194.15 and 194.20.

(b) Other compressed gases are regulated in accordance with the appropriate portions of Subpart 146.24 or Part 147 of Subchapter N (Dangerous Cargoes) of this chapter.

§ 194.05–17 Poisonous articles as chemical stores—Detail requirements.

(a) Poisonous articles as chemical stores and reagents shall be governed by Subparts 194.15 and 194.20.

(b) Other poisonous articles shall be regulated by the appropriate portions of Subpart 146.25 or Part 147 of Subchapter N (Dangerous Cargoes) of this chapter.

§ 194.05–19 Combustible liquids as chemical stores—Detail requirements.

(a) Combustible liquid chemical stores and reagents shall be governed by Subparts 194.15 and 194.20.

(b) Other combustible liquids shall be regulated by the appropriate portions of Subpart 146.26 or Part 147 of Subchapter N (Dangerous Cargoes) of this chapter.

§ 194.05–21 Hazardous articles as chemical stores—Detail requirements.

(a) Hazardous articles as chemical stores and reagents shall be governed by appropriate portions of Subparts 194.15 and 194.20.

(b) Other hazardous articles shall be regulated by the appropriate portions of Subpart 146.27 or Part 147 of Subchapter N (Dangerous Cargoes) of this chapter.

Subpart 194.10—Magazines

§ 194.10–1 Application.

(a) The provisions of this subpart apply to the construction of integral magazines, magazine vans, and magazine chests.

(b) Loading, loading procedures, shipper's requirements, and other features not related to the construction of magazines shall be in accordance with the applicable provisions of Part 146 of Subchapter N (Dangerous Cargoes) of this chapter and 33 CFR Part 6 and Parts 121 to 126, inclusive.

§ 194.10–5 Type and location.

(a) *Integral magazines.* (1) Magazines shall be of permanent construction located below the freeboard deck and where practicable below the waterline.

(2) Magazines shall not be located in horizontal proximity to or below accommodation spaces.

(3) Magazines shall not be located adjacent to the collision bulkhead, nor in bearing with a bulkhead forming the boilerroom, engineroom, galley, or other high fire hazard area boundary. If it is necessary to construct the magazine in proximity to these areas, a cofferdam space of at least 2 feet shall be provided between the bulkhead or deck involved and the magazine. Such a cofferdam shall be provided with suitable ventilation and shall not be used for storage purposes.

(b) *Magazine vans.* (1) Magazine vans may be installed on deck in a location protected from boarding seas. The location selected shall not impair access to accommodations or other spaces necessary to the safe working and navigation of the vessel and shall not be within 15 feet of ventilation terminals emitting warm air or hazardous vapors, such as from galleys and pumprooms, or within 10 feet of any radio apparatus or antenna lead.

(2) Magazine vans may be installed below decks in holds provided the hold location meets the location requirements for integral magazines. The cofferdam requirement of paragraph (a)(3) of this section is considered as fulfilled if the van is of steel construction. Holds so utilized shall not be used for stowage of other dangerous or hazardous materials covered by Part 146 of Subchapter N (Dangerous Cargoes) of this chapter. The stowage of other explosives or oxidizing materials in the same hold is permitted in accordance with the requirements of Part 146 of this chapter.

(c) *Magazine chests.* (1) Magazine chests shall be located on the weather decks in a position suitable for jettisoning the contents.

(2) Magazine chests shall be set off at least 4 inches from decks and deckhouse.

(3) Magazine chests shall not be located within 15 feet of ventilation terminals emitting warm air or hazardous vapors, such as from galleys and pumprooms.

(4) Magazine chests intended for the stowage of blasting caps, detonators, or boosters, in addition to the requirements in this paragraph, shall not be stowed within 10 feet of any radio apparatus or antenna leads.

§ 194.10–10 Integral magazine construction.

(a) Magazines shall be of permanent watertight construction. Bulkheads and decks, including the deck overhead, which are common with storerooms or workshops shall be of A–15 construction as defined by § 72.05–10 of Subchapter H (Passenger Vessels) of this chapter. Flush construction shall be employed where practicable.

(b) Where the shell or unsheathed weather decks form boundaries of the magazine spaces suitable approved incombustible thermal insulation shall be provided to prevent condensation of moisture.

(c) Where a tank top forms the magazine deck it shall be insulated with an approved deck covering to prevent condensation of moisture. Tank top manholes shall not be installed in magazines.

(d) Light fixtures shall be of an approved type equipped with globes and guards. Control of the lighting system shall be from a location external to the magazine. An indicator light shall be provided at the switch location to indicate when the lighting circuits are energized. Other electrical equipment and wiring shall not be installed within or pass through the magazine. Electrical cables enclosed in a watertight trunk are permitted.

(e) Piping, other than fresh or salt water service and drainage system, shall not be routed through magazines except as required for the magazines themselves. Other piping systems enclosed in a watertight trunk are permitted.

(f) Access doors for the magazine, or magazine groups, shall be of substantial

watertight construction and be provided with means whereby they may be securely locked.

(g) Racks, stanchions, battens, and other devices shall be installed to provide rigid and safe stowage of explosives in their approved shipping containers with a minimum of dunnage.

(h) Decks shall be covered with a permanent nonslip nonspark covering.

§ 194.10–15 Magazine van construction.

(a) Vans shall be of substantial metal construction. Their interior shall be insulated with an approved incombustible insulation to the standards required for A–15 divisional bulkheads as prescribed in Part 72 of Subchapter H (Passenger Vessels) of this chapter. The interior shall be lined flush with incombustible materials.

(b) Lighting fixtures, if installed, shall be of an approved type equipped with globes and guards. All electrical installations shall meet the applicable requirements of Subchapter J (Electrical Engineering) of this chapter. The electrical terminals for connections to the ship's electrical system shall be of watertight construction and bear a label plate denoting the power requirement of the van.

(c) Access doors and ventilation closures shall be of watertight construction. Doors shall be provided with means whereby they may be securely locked.

(d) Vans shall be provided with suitable pads and clips for securing to the deck and for installation of wire rope sway braces.

(e) Vans shall bear a label plate stating light weight, gross weight and weight of explosives. Gross weight shall not exceed 250 pounds per square foot of deck area.

§ 194.10–20 Magazine chest construction.

(a) Magazine chests shall be of watertight metal construction with flush interior. The body and lid shall have a minimum thickness of ⅛ inch.

(b) Permanent sun shields shall be provided for sides and top including the lid. These shall have a minimum thickness of ⅛-inch aluminum or 16-gage steel. Side shields shall be offset from the body a distance of 1 inch. The top shield shall be offset a distance of 1½ inches. Sun shields may be omitted when chests are installed "on deck protected," shielded from direct exposure to the sun.

(c) Chests shall be limited to a gross capacity of 100 cubic feet.

(d) Chests shall be secured to the vessel's structure by means of permanently installed foundation clips or bolts or a combination thereof. Lashings will not be acceptable.

(e) Chests shall be provided with substantial hasps and staples for locking purposes.

§ 194.10–25 Ventilation.

(a) *Integral magazines.* (1) All integral magazines shall be provided with natural or mechanical ventilation. Design calculations shall be submitted demonstrating that the system has sufficient capacity to maintain the magazine temperature below 100° F. with 88° F. weather air.[1] Mechanical cooling may be used where ventilation requirements exceed 1,500 cubic feet per minute.

(2) Ventilation systems shall be of watertight construction and shall serve no other space. Weather cowls shall be provided with a double layer of wire screen of not less than ⅛-inch mesh. Metal watertight closures shall be provided for use when the ventilation system is not in operation. A 2-inch IPS bypass with check valve shall be provided in parallel with at least one of the ventilation closures to prevent pressure buildup.

(b) *Magazine vans.* (1) All magazine vans shall be provided with natural ventilation sufficient to maintain the inside air temperature below 130° F. with an assumed outside temperature of 115° F.

(2) Ventilation supply weather openings shall be located at least 6 feet above the deck. Exhaust terminals shall be located in the van overhead. Louvers or vanned cowls with a double layer of wire screen of not less than ⅛-inch mesh shall be provided for protection of weather openings.

§ 194.10–30 Magazine sprinklers.

(a) *Sprinkler system required.* (1) A manual control, hydraulic control, or automatic sprinkler system shall be installed in each magazine or magazine group. The control valve shall generally be in accordance with Specification MIL–F–17501[2] insofar as materials and test fittings are concerned. All systems shall be remotely operable from a control station on the freeboard deck and manually operable at the control valve location.

(2) Where automatic systems are installed sprinkler heads shall be of the open head design so as to permit either manual or automatic operation.

(3) Sprinkler systems shall be designed in accordance with the requirements of Part 76 of Subchapter H (Passenger Vessels) of this chapter. Minimum total system capacity shall be based on 0.8 gallon per minute per square foot of overhead area.

(4) The normally required fire pumps may be used for magazine sprinkling purposes. However, the use of the magazine sprinkling system shall not interfere with the simultaneous use of the fire main system.

(b) *Magazine vans.* (1) A manual control sprinkler system shall be installed in each magazine van. The system shall be connected to the nearest fire main outlet by jumper hose. The hose shall be protected from physical damage by a grating or similar arrangement. The fire station valve shall serve as the sprinkler control valve.

(2) Sprinkler systems shall be designed in accordance with the requirements of Part 76 of Subchapter H (Passenger Vessels) of this chapter, except that the system capacity shall be increased to provide a coverage of 0.8 gallon per minute per square foot of overhead area.

§ 194.10–35 Labeling.

(a) Labeling shall be in 3-inch block type lettering. Letters shall be red or white, whichever provides the better contrast against the background. On small chests the labeling size may be reduced to that consistent with the size of the chest so that the inscription may be placed in its entirety on the side or top.

(b) The access door to magazines and magazine vans shall bear the inscription:

MAGAZINE
KEEP LIGHTS AND FIRE AWAY
KEEP DOOR CLOSED
REMOVE MATCHES AND LIGHTERS
PRIOR TO ENTERING

(c) Magazine chests shall be marked in a conspicuous location, preferably the top, with the inscription:

MAGAZINE CHEST
KEEP LIGHTS AND FIRE AWAY

(d) Magazine chests used for blasting caps, detonators, or boosters shall be marked in a conspicuous location with the inscription as appropriate:

BLASTING CAP LOCKER
or
DETONATOR LOCKER
or
BOOSTER LOCKER
KEEP LIGHTS AND FIRE AWAY

(e) Magazine van, unless specifically approved as a portable magazine under provisions of § 146.09–6 of Subchapter N (Dangerous Cargoes) of this chapter, shall bear the additional statements on each side:

MAGAZINE
WARNING
DO NOT LIFT WITH CONTENTS

(f) Control locations for magazine sprinkler systems, in addition to the operating instructions required by § 76.20–20 of Subchapter H (Passenger Vessels) of this chapter shall bear the inscription:

MAGAZINE SPRINKLER CONTROL

Subpart 194.15—Chemistry Laboratory and Scientific Laboratory

§ 194.15–1 General.

(a) The chemical laboratories shall be considered to be service areas, and as such shall be subject to the applicable requirements of § 190.07–10(d). The scientific laboratories shall be considered to be service areas.

(1) Installed and portable equipment shall be constructed of incombustible materials. Utility items, such as hoses and reagent containers, where compliance is not practicable are exempted from the provisions of this section.

(b) Storage of all equipment, materials, etc., and cleanliness shall be con-

[1] U.S. Navy Design Data Sheet DD 3801–1 may be used as the basis for design calculations. This information may be obtained from the Commanding Officer, Naval Supply Depot, 5801 Tabor Avenue, Philadelphia, Pa. 19120.

[2] This specification may be obtained from the Commanding Officer, Naval Supply Depot, 5801 Tabor Avenue, Philadelphia, Pa. 19120.

sistent with sound laboratory practices. All items shall be securely stowed.

(c) The deck of the laboratory shall be covered with a nonskid masonry or stone material so fashioned that spillage may be easily flushed down suitably installed deck drains. Deck materials such as terrazzo, ceramic tile, or concrete are considered suitable and acceptable.

(d) The access doors to the laboratory shall bear the inscription "Chemical Laboratory", or "Scientific Laboratory" in lettering meeting requirements of § 194.10–35(a).

§ 194.15–3 Responsibility.

(a) With the knowledge and approval of the master, the senior member of the scientific party embarked may supervise the safety and operation of the chemical laboratory.

(b) The laboratory supervisor shall:

(1) Maintain the highest standards of safe working conditions.

(2) Provide safeguards against hazardous undertakings.

(3) Educate personnel working in the laboratory spaces to be alert for hazards.

§ 194.15–5 Ventilation.

(a) Chemical laboratories and scientific laboratories shall be equipped with power ventilation system of the exhaust type. The system shall have a capacity sufficient to effect a complete change of air in not more than 4 minutes based upon the volume of the compartment.

(1) Power ventilation units shall have nonsparking impellers and shall not produce a source of vapor ignition in either the compartment or the ventilation system associated with the compartment.

(2) The power ventilation shall be interlocked with a visual alarm such that the alarm will be actuated in the event of ventilation shutdown or failure.

(b) This ventilation system shall be independent of any other ventilation system in the vessel. It shall serve no other space. It shall be of watertight construction.

(c) Ventilation from the weather deck shall be provided. Ventilation shall terminate more than 6 feet from any opening to the interior part of the vessel and from any possible source of vapor ignition.

(d) Operations, reactions or experiments which produce toxic, noxious or corrosive vapors shall be conducted under a suitably installed fume hood. The fume hood shall be equipped with an independent power exhaust ventilation system which terminates so as to prevent fumes from entering other portions of the vessel. The exhaust system of the fume hood shall be compatible with the ventilation system of the laboratory to prevent fumes from backing-up within the fume hood system. The terminals shall be equipped with acceptable flame screens.

§ 194.15–7 Fire protection.

(a) If a fixed firefighting system is installed, it shall be an independent, fixed automatic carbon dioxide firefighting system meeting the applicable requirements in Subpart 193.15 of this subchapter. Such an installation envisions the installation of a manual control station located in the vicinity of one of the main escapes from the space as discussed in § 193.15–10(c) of this subchapter. Other fixed firefighting systems will be given special consideration by the Commandant.

(b) Portable fire extinguishers are required in accordance with Table 193.50–10(a) of this subchapter.

§ 194.15–9 Storage.

(a) Chemicals mentioned in § 194.05–3 may be stored in small working quantities in the laboratory provided their containers are labeled in accordance with § 195.05–5(a).

(b) Chemicals in greater than small laboratory working quantities shall be stored in approved containers in the chemical storeroom as prescribed in § 194.05–1(b).

(c) All material stored in any laboratory shall be securely stowed for sea with due consideration for chemical compatibility and safety standards.

(1) Items shall not be stowed on the deck.

(2) Shelving shall be so constructed as to provide a clear space of at least 4 inches between the bottom shelf and the deck.

§ 194.15–11 Flushing systems.

(a) The laboratory shall be equipped with a fresh water safety shower for personnel use in emergencies.

(b) A garden hose-type flushing system of fresh water shall be provided for the purpose of flushing away chemical spills within the laboratory. The laboratory shall have acceptable overboard drainage system(s) to facilitate this flushing system. The laboratory drainage systems shall be separate from the other drainage systems.

§ 194.15–15 Chemicals other than compressed gases.

(a) Chemicals used in the chemistry laboratory and specifically mentioned in Part 146 of Subchapter N (Dangerous Cargoes) of this chapter may be stored in small working quantities in the chemical laboratory.

§ 194.15–17 Compressed gases.

(a) When, in consideration for a particular operation, compressed gases are needed within the laboratory, the cylinders may be temporarily installed in the laboratory, provided no more than one (1) cylinder of each gas is in the laboratory simultaneously. When transporting compressed gas cylinders to, from, or within the vessel, the cylinder valves shall be capped or otherwise protected in accordance with § 146.24–15(d) of Subchapter N (Dangerous Cargoes) of this chapter.

(b) Cylinders temporarily installed in the laboratory shall be securely stowed for sea. Appropriate safety signs shall be displayed and safety precautions observed.

(c) Oxygen and acetylene cylinders for use in ship's maintenance shall not be stored in the laboratory.

(d) Systems providing gas for bunsen burners or similar semipermanent/permanent installations shall be installed in accordance with Subpart 195.03.

§ 194.15–19 Electrical.

(a) All electrical equipment located within 18 inches of the deck shall be in accordance with the applicable requirements of Subchapter J (Electrical Engineering) of this chapter for Class I, Division 2, hazardous locations. Electrical equipment located 18 inches or more above the deck may be of a type suitable for wet or dry locations in accordance with Subchapter J.

Subpart 194.20—Chemical Stores and/or Storerooms

§ 194.20–1 General.

(a) The chemical storerooms shall be considered to be service areas and as such shall be subject to the applicable requirements of § 190.07–10(d).

(1) Installed and portable equipment shall be constructed of incombustible materials.

(2) The access doors to the storeroom shall bear the inscription "Chemical Storeroom" in lettering meeting requirements of § 194.10–35(a).

(b) Storage and cleanliness shall be consistent with good chemical stowage practices.

(c) The deck of the chemical storeroom shall be covered with a nonskid masonry or stone material so fashioned that spillage may be easily flushed down suitably installed deck drains. Deck materials such as terrazzo, ceramic tile, or concrete are considered suitable and acceptable.

(d) Chemical reactions and experiments shall not be conducted in the chemical storeroom.

(e) The chemical storeroom shall be for the exclusive use of chemicals to be used in the chemistry laboratory.

(f) All doors shall open in the direction of escape.

(g) Movement of chemicals to, or from, the storeroom shall be accomplished utilizing suitable, portable containers. In no event shall piping systems, or similar arrangements, be permitted for transfer of chemical stores between the storeroom and the area in which the chemical is to be used.

§ 194.20–3 Responsibility.

(a) With the knowledge and approval of the master, the senior member of the scientific party embarked may supervise the safety and operation of the chemical storerooms.

(b) The chemical storeroom supervisor shall:

(1) Maintain the highest standards of safe working conditions.

(2) Provide safeguards against hazardous undertakings.

(3) Educate personnel working in, and near, the storeroom to be alert for hazards.

§ 194.20–5 Ventilation.

(a) Chemical storerooms shall be equipped with a power ventilation system of exhaust type. The system shall have a capacity sufficient to effect a complete change of air in not more than 3 minutes based upon the volume of the compartment.

(1) Power ventilation units shall have nonsparking impellers and shall not produce a source of vapor ignition in either the compartment or the ventilation system associated with the compartment.

(2) The power ventilation shall be interlocked with an audible alarm such that the alarm will be actuated in the event of ventilation shutdown or failure.

(b) This ventilation system shall be independent of any other ventilation system. It shall serve no other space in the vessel. It shall be of watertight construction.

(c) Inlets to exhaust ducts shall be provided and located at points where concentration of vapors may be expected. Ventilation from the weather deck shall be provided. Ventilation shall terminate more than 6 feet from any opening to the interior part of the vessel and from any possible source of vapor ignition. Terminals shall be fitted with acceptable flame screens.

§ 194.20–7 Fire protection.

(a) Each chemical storeroom shall be protected by an independent, fixed automatic carbon dioxide extinguishing system installed in accordance with Subpart 193.15 of this subchapter. A manual control station shall be located as directed by § 193.15–10(c) of this subchapter.

(b) Portable fire extinguishers are required in accordance with Table 193.50–10(a) of this subchapter.

§ 194.20–9 Storage.

(a) Chemical stores shall be stored in the chemical storeroom as prescribed in § 194.05–1(b).

(b) All items stored in the storeroom shall be secured against shifting and with due consideration for chemical compatibility and safety standards.

(1) Items shall not be stowed on the deck.

(2) Shelving shall be so constructed as to provide a clear space of at least 4 inches between the bottom shelf and the deck.

§ 194.20–11 Flushing systems.

(a) A garden-hose-type fresh water flushing system shall be provided for the purpose of flushing away chemical spills within the storeroom.

(b) The storeroom shall have an acceptable drainage system to facilitate this flushing system. These drainage systems shall be separate from the other drainage systems.

§ 194.20–15 Chemical stores other than compressed gases.

(a) Flammable liquids are excluded from the storeroom unless contained in properly marked and labeled metal safety cans not in excess of 5 gallons of each kind. Refer to Subpart 194.05 for applicable requirements governing quantities greater than 5 gallons.

(b) Combustible liquids in approved portable drums, barrels or containers not in excess of 55 gallons of each kind may be stored in the storeroom. Refer to Subpart 194.05 for applicable requirements governing quantities greater than 55 gallons.

(c) Containers when used for dispensing flammable and combustible liquids shall be equipped with automatic closing valves.

(d) Poisons listed in Part 146 of Subchapter N (Dangerous Cargoes) of this chapter may be stored in approved containers in the chemical storeroom.

(e) Explosives and oxidizing materials not for use in the chemical laboratory shall not be stored in the chemical storeroom.

(f) Chemical stores specifically mentioned in Part 146 of Subchapter N (Dangerous Cargoes) of this chapter may be carried in the chemical storeroom.

§ 194.20–17 Compressed gases.

(a) Nonflammable compressed gases (excluding oxygen) may be securely stowed in the storeroom: *Provided*, That no more than three (3) cylinders of the same gas nor more than eight (8) cylinders total are stowed simultaneously in the same chemical storeroom.

(b) Flammable compressed gases and oxygen shall be stowed in accordance with Subpart 146.24 of Subchapter N (Dangerous Cargoes) of this chapter.

(c) Compressed gas cylinders shall have valve protection in accordance with § 146.24–15(d) of Subchapter N (Dangerous Cargoes) of this chapter, and shall be securely stowed in a vertical position in suitable racks.

§ 194.20–19 Piping and electrical requirements.

(a) Piping, electrical equipment, and wiring shall not be installed within or pass through a chemical storeroom except as required for the chemical storeroom itself.

(b) The electrical installation shall be in accordance with the applicable requirements of Subchapter J (Electrical Engineering) of this chapter for Class I, Division 1, Group C hazardous locations.

Subpart 194.90—Vessels Contracted for Prior to March 1, 1967

§ 194.90–1 Requirements.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Existing arrangements, materials, and facilities previously approved but not meeting the applicable requirements of Subparts 194.05 through 194.20 may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs, alterations, and replacements may be permitted to the same standards as the original design: *Provided*, That in no case will a greater departure from the standards of Subparts 194.05 through 194.20 be permitted than presently exists.

(2) All new installations, major alterations, and major replacements shall meet the applicable requirements in this part for new vessels.

(3) The general requirements of Subparts 194.05 through 194.20 shall apply unless in the opinion of the Officer in Charge, Marine Inspection, it is unreasonable or impracticable, or the arrangement or construction of the vessel makes it unnecessary.

PART 195—VESSEL CONTROL AND MISCELLANEOUS SYSTEMS AND EQUIPMENT

Subpart 195.01—Application

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195.01–1 General.

Subpart 195.03—Marine Engineering Systems

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Subpart 195.05—Electrical Engineering and Interior Communications Systems

195.05–1 Installation and details.

Subpart 195.07—Anchors, Chains, and Hawsers

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195.07–5 Ocean, coastwise, or Great Lakes service.
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Subpart 195.35—Fireman's Outfit

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195.35–1 Application.
195.35–5 General.
195.35–10 Fireman's outfit.
195.35–15 Stowage.
195.35–20 Spare charges.
195.35–90 Vessels contracted for prior to March 1, 1967.

AUTHORITY: The provisions of this Part 195 issued under R.S. 4405, as amended, 4462, as amended, sec. 5, 79 Stat. 424; 46 U.S.C. 375, 416, 448. Interpret or apply R.S. 4417, as amended, 4418, as amended, 4453, as amended, 4488, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended; 46 U.S.C. 391, 392, 435, 481, 395, 363, 367; E.O. 11239, July 31, 1965, 30 F.R. 9671, 3 CFR 1965 Supp. Treasury Dept. Orders 120, July 31, 1950, 15 F.R. 6521, CGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–38, Oct. 26, 1950, 24 F.R. 8857; 167–66, Sept. 8, 1965, 30 F.R. 11735; unless otherwise noted.

Subpart 195.01—Application

§ 195.01–1 General.

(a) The provisions of this part shall apply to all vessels except as specifically noted in this part.

Subpart 195.03—Marine Engineering Systems

§ 195.03–1 Installation and details.

(a) The installation of all systems of a marine engineering nature, together with the details of design, construction, and installation, shall be in accordance with the requirements of Subchapter F (Marine Engineering) of this chapter. Systems of this type include the following:

Steering Systems.
Bilge and Ballast Systems.
Tank Vent and Sounding Systems.
Overboard Discharges and Shell Connections.
Pipe and Pressure Systems.
Liquefied Petroleum Gas Systems.

Subpart 195.05—Electrical Engineering and Interior Communications Systems

§ 195.05–1 Installation and details.

(a) The installation of all system of an electrical engineering or interior communication nature, together with the details of design, construction, and installation shall be in accordance with the requirements of Subchapter J (Electrical Engineering) of this chapter. Systems of this type include the following:

Ship's Service Generating Systems.
Ship's Service Power Distribution Systems.
Ship's Lighting Systems.
Electric Propulsion and Propulsion Control Systems.
Emergency Lighting and Power Systems.
Electric Lifeboat Winch Systems.
Electric Steering Gear and Steering Control Systems.
Fire Detecting and Alarm Systems.
Sound Powered Telephone and Voice Tube Systems.
Engine Order Telegraph Systems.
Rudder Angle Indicator Systems.
Refrigerated Spaces Alarm Systems.
Navigation Lights Systems.
Daylight Signaling Lights.
Miscellaneous Machinery Alarms and Controls.
General Alarm Systems.

Subpart 195.07—Anchors, Chains, and Hawsers

§ 195.07–1 Application.

(a) The provisions of this subpart, with the exception of § 195.07–90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 195.07–90.

§ 195.07–5 Ocean, coastwise, or Great Lakes service.

(a) Vessels in ocean, coastwise, or Great Lakes service shall be fitted with anchors, chains, and hawsers which shall be in general agreement with the standards established by the American Bureau of Shipping, see Subpart 188.35 of this subchapter.

§ 195.07–10 Lakes, bays, and sounds, or river service.

(a) Vessels in lakes, bays, and sounds, or river service shall be fitted with such ground tackle and hawsers as deemed necessary by the Officer in Charge, Marine Inspection, depending upon the size of the vessel and the waters on which it operates.

§ 195.07–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) Existing arrangements, materials, installations, and facilities previously accepted or approved shall be considered satisfactory for the same service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. If the service of the vessel is changed, the suitability of the equipment will be established by the Officer in Charge, Marine Inspection.

(2) Minor repairs, alterations and replacements may be permitted to the same standards as the original installations. However, all new installations, major alterations, or major replacements shall meet the applicable requirements in this subpart for new vessels.

Subpart 195.09—Scientific Equipment

AUTHORITY: The provisions of this Subpart 195.09 interpret or apply R.S. 4420, as amended, 4433, as amended, 4472, as amended; 46 U.S.C. 407, 411, 170.

§ 195.09–1 Application.

(a) The provisions of this subpart shall apply to all vessels.

§ 195.09–5 General.

(a) All scientific equipment and their electrical or pressure connections to the ship's supply shall be designed to good commercial standards for such appliances.

(b) It shall be the responsibility of the owner to assure that the scientific equipment and their electrical or pressure connections to the ship's supply are maintained in such a manner as to be free of personnel hazards which may be caused by shock, temperature extremes, and moving parts.

Subpart 195.11—Portable Vans, Magazines and Chests

AUTHORITY: The provisions of this Subpart 195.11 interpret or apply R.S. 4472, as amended, 46 U.S.C. 170.

§ 195.11–1 Application.

(a) The provisions of this subpart shall apply to all vessels.

§ 195.11–5 Scope.

(a) The provisions in this subpart contain requirements for the design, construction, and stowage of portable vans, magazines, chests, etc., which may be carried on board vessels. The regulations apply to portable structures which are capable of being lifted in either a loaded or unloaded condition on and off the vessel.

(b) Special consideration may be given to the approval of portable structures which have been used for other purposes prior to proposed use on these vessels.

(c) As used in this subpart, portable vans, magazines, chests, etc., are intended to include those temporary structures which may be carried aboard a vessel for a limited period of time and which are not permanently attached to the vessel. The use, arrangement, and handling of such portable structures shall be approved by the Officer in Charge, Marine Inspection, prior to placement on board the vessel.

§ 195.11–10 Plan approval.

(a) Plans in quadruplicate showing the details of construction shall be submitted to the Commandant (MMT), U.S. Coast Guard, or to a field technical unit in the same manner as described in § 189.55–15 of this subchapter for the vessel plans.

(b) Plans shall be approved by the Commandant in the same manner as followed for the vessel plans, as described in Part 189 of this subchapter.

§ 195.11–15 Construction.

(a) Portable vans shall be substantially constructed of steel or other material satisfactory to the Commandant.

(b) Portable magazines, chests, etc., and similar temporary structures shall comply as far as reasonable and practicable with the requirements of this subchapter applicable to permanent spaces on a vessel intended for the same usage.

§ 195.11–17 Portable tanks.

(a) Portable tanks for flammable or combustible liquids in bulk shall not be carried on vessels.

§ 195.11–20 Attachment to the vessel.

(a) Portable vans, magazines, chests, etc., and other similar temporary structures, not intended to be occupied, shall be securely attached to the vessel to prevent shifting.

(b) Portable vans and similar temporary structures carried aboard the ves-

sel and intended to be occupied during the vessel's operation shall be securely attached to the vessel by welding or bolting.

(c) Portable cable lashings are not permitted.

§ 195.11–25 Access to or means of escape from occupied portable vans.

(a) The placement of portable vans and similar temporary structures carried aboard a vessel shall be such as to provide a walkway of not less than 30 inches in width and shall be in general accordance with the requirements in Subpart 190.10 of this subchapter except that a van of 320 square feet of floor area or less may have one means of escape in lieu of the two required by § 190.10–5 of this subchapter.

Subpart 195.13—Radiotelegraph and Radiotelephone

§ 195.13–1 Required by Federal Communications Commission.

(a) Radiotelegraph and radiotelephone installations are required on certain vessels. Details of the application of this requirement as well as details of the installation shall be as required by the statutes and regulations under the jurisdiction of the Federal Communications Commission.

Subpart 195.15—Radio Direction Finder

§ 195.15–1 When required.

(a) All mechanically propelled vessels of 1,600 gross tons and over, in ocean service or on an international voyage, shall be fitted with a radio direction finder. Details of the installation shall be as required by the statutes and regulations under the jurisdiction of the Federal Communications Commission.

Subpart 195.20—Navigation Lights and Shapes, Whistles, Foghorns, Fog Bells, and Gongs

§ 195.20–1 Vessels operating on waters governed by the International Rules of the Road.

(a) All vessels operating on waters governed by the International Rules of the Road (33 U.S.C. 1051–1094) shall be equipped with the navigation lights and shapes, whistles, foghorns, fog bells, and gongs, as required by those rules.

§ 195.20–10 Vessels operating on waters governed by the Inland, Great Lakes, or Western Rivers Rules of the Road.

(a) All vessels (other than motorboats) operating on waters governed by the Inland, Great Lakes, or Western Rivers Rules of the Road (33 U.S.C. 154–232, 241–295, 301–355) shall be equipped with the navigation lights and shapes, whistles, foghorns, fog bells, and gongs as required by the Rules of the Road applicable to the waters on which the vessel is being navigated. For motorboats see the applicable requirements described in Part 25 of Subchapter C (Uninspected Vessels) of this chapter.

Subpart 195.27—Sounding Equipment

§ 195.27–1 When required.

(a) All mechanically propelled vessels of 500 gross tons and over in ocean or coastwise service and all such vessels in Great Lakes service and certificated for service on the River St. Lawrence eastward of the lower exit of the St. Lambert Lock at Montreal, Canada, shall be fitted with an efficient mechanical or electronic deep-sea sounding apparatus and a deep-sea hand lead. All other mechanically propelled vessels of 1,500 gross tons and over in Great Lakes service shall carry a deep-sea hand lead.

Subpart 195.30—Protection From Refrigerants

§ 195.30–1 Application.

(a) The provisions of this subpart, with the exception of § 195.30–90, shall apply to all vessels contracted for on or after March 1, 1967.

(b) Vessels contracted for prior to March 1, 1967, shall meet the requirements of § 195.30–90.

§ 195.30–5 General.

(a) All self-contained breathing apparatus and gas masks shall be of an approved type, constructed in accordance with Subpart 160.011 of Subchapter Q (Specifications) of this chapter.

(b) All equipment shall be maintained in an operative condition, and it shall be the responsibility of the master and chief engineer to ascertain that a sufficient number of the crew are familiar with the operation of the equipment.

§ 195.30–15 Refrigeration masks.

(a) On all vessels equipped with refrigeration, other than small unit type refrigeration of not more than 20 cubic feet capacity, a gas mask, suitable for protection against each refrigerant used, or a self-contained breathing apparatus shall be provided. The refrigeration gas mask shall be stowed convenient to, but outside of the spaces containing the refrigeration equipment.

(b) A complete recharge shall be carried for each gas mask and self-contained breathing apparatus. The spare charge shall be stowed in the same location as the equipment it is to reactivate.

§ 195.30–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) The requirements of §§ 195.30–5 and 195.30–15 shall be complied with insofar as the number of items of equipment and the method of stowage of the equipment is concerned unless it can be shown to the satisfaction of the Officer in Charge, Marine Inspection, that other arrangements provide adequate protection.

(2) Existing items of equipment previously approved, but not meeting the applicable specifications set forth in § 195.30–5, may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection, but all new installations or replacements shall meet the applicable specifications or requirements in this subpart for new vessels.

Subpart 195.35—Fireman's Outfit

§ 195.35–1 Application.

(a) The provisions of this subpart, with the exception of § 195.35–90, shall apply to all vessels other than unmanned barges contracted for on or after March 1, 1967.

(b) All vessels other than unmanned barges contracted for prior to March 1, 1967, shall meet the requirements in § 195.35–90.

(c) All unmanned barges are exempted from the requirements in this subpart. However, if such barges carry on board a fireman's outfit, then such equipment shall be in accordance with the requirements in this subpart for manned barges.

§ 195.35–5 General.

(a) All flame safety lamps shall be of an approved type, constructed in accordance with Subpart 160.016 of Subchapter Q (Specifications) of this chapter.

(b) All self-contained breathing apparatus shall be of an approved type, constructed in accordance with Subpart 160.011 of Subchapter Q (Specifications) of this chapter.

(c) All flashlights shall be of an approved three-cell explosion-proof type, constructed in accordance with Subpart 161.008 of Subchapter Q (Specifications) of this chapter.

(d) All lifelines shall be of steel or bronze wire rope. Steel wire rope shall be either inherently corrosion-resistant, or made so by galvanizing or tinning. Each end shall be fitted with a hook with keeper having throat opening which can be readily slipped over a ⅝-inch bolt. The total length of the lifeline shall be dependent upon the size and arrangement of the vessel, and more than one line may be hooked together to achieve the necessary length. No individual length of lifeline may be less than 50 feet in length. The assembled lifeline shall have a minimum breaking strength of 1,500 pounds.

(e) All equipment shall be maintained in an operative condition, and it shall be the responsibility of the master and chief engineer to ascertain that a sufficient number of the crew are familiar with the operation of the equipment.

§ 195.35–10 Fireman's outfit.

(a) A fireman's outfit shall consist of one self-contained breathing apparatus with lifeline attached, one flashlight, one flame safety lamp, and one fire axe.

(b) Every vessel shall carry at least one fireman's outfit.

§ 195.35–15 Stowage.

(a) Equipment shall be stowed in a convenient, accessible location as determined by the master, for use in case of emergency.

§ 195.35–20 Spare charges.

(a) A complete recharge shall be carried for each self-contained breathing apparatus, and a complete set of spare batteries shall be carried for each flashlight. The spares shall be stowed in the same location as the equipment it is to reactivate.

§ 195.35–90 Vessels contracted for prior to March 1, 1967.

(a) Vessels contracted for prior to March 1, 1967, shall meet the following requirements:

(1) The requirements of §§ 195.35–5 through 195.35–20 shall be complied with insofar as the number of items of equipment and the method of stowage of the equipment is concerned.

(2) Existing items of equipment previously approved, but not meeting the applicable specifications set forth in § 195.35–5, may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection, but all new installations or replacements shall meet the applicable specifications or requirements for new vessels.

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Subpart 196.85—Magazine Control

196.85–1 Magazine operation and control.

AUTHORITY: The provisions of this Part 196 issued under R.S. 4405, as amended, 4462, as amended, sec. 5, 79 Stat. 424; 46 U.S.C. 375, 416, 445. Interpret or apply R.S. 4417, as amended, 4418, as amended, 4453, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended; 46 U.S.C. 391, 392, 435, 395, 368, 367. Treasury Dept. Orders 120, July 31, 1950, 15 F.R. 6521; OGFR 56–28, July 24, 1956, 21 F.R. 5659; 167–66, Sept. 8, 1965, 30 F.R. 11735; unless otherwise noted.

Subpart 196.01—Application

§ 196.01–1 General.

(a) The provisions of this part shall apply to all vessels except as specifically noted in this part.

Subpart 196.03—Statutory Penalties

§ 196.03–1 General.

(a) The marine safety and criminal statutes provide penalties for the violation of the applicable provisions of this subchapter, which penalties, depending upon the gravity of the violation, are as follows:

(1) Assessment and collection of civil monetary penalty.

(2) Criminal prosecution where no loss of life results.

(3) Criminal prosecution for manslaughter were loss of life results from violation of statute or regulation or from misconduct, negligence, or inattention to duty.

(4) Libel against vessel.

(b) In addition to the foregoing, any licensed or certificated personnel committing an act of misbehavior, negli-

gence, unskillfulness, endangering life, violation of marine safety statutes or regulations or requirements thereunder, and incompetency shall be subject to proceedings under the provisions of 46 U.S.C. 239 and regulations thereunder (Part 137 of this chapter) with respect to suspension or revocation of license or certificate.

Subpart 196.05—Notice to Mariners and Aids to Navigation

§ 196.05–1 Duty of officers.

(a) Licensed deck officers are required to acquaint themselves with the latest information published by the Coast Guard and the U.S. Navy regarding aids to navigation. Neglect to do so is evidence of neglect of duty. It is desirable that all vessels have available in the pilothouse for convenient reference at all times a file of the applicable Notice to Mariners.

(b) Weekly Notices to Mariners (Great Lakes Edition) as published by the Commander, 9th Coast Guard District, contains announcements and information on changes in aids to navigation and other marine information affecting the safety of navigation on the Great Lakes. These notices may be obtained free of charge, by making application to Commander, 9th Coast Guard District.

(c) Weekly Notices to Mariners (Part I, Atlantic and Mediterranean) are prepared jointly by the U.S. Coast Guard, the U.S. Coast and Geodetic Survey and the U.S. Naval Oceanographic Office. They include changes in aids to navigation in assembled form for the 1st, 3d, 5th, 7th, and 8th Coast Guard Districts and the Greater Antilles Section. Foreign marine information in the Atlantic and Mediterranean area is also included in these notices. These notices are available without charge from the U.S. Naval Oceanographic Office, Branch Oceanographic Offices, and U.S. Collector of Customs of the major seaports in the United States and are also on file in the U.S. Consulates where they may be inspected.

(d) Weekly Notices to Mariners (Part II, Pacific and Indian Oceans) are prepared jointly by the U.S. Coast Guard, the U.S. Coast and Geodetic Survey, and the U.S. Naval Oceanographic Office. They include changes in aids to navigation in assembled form for the 11th, 12th, 13th, 14th, and 17th Coast Guard Districts. Foreign marine information in the Pacific and Indian Oceans area is also included in these notices. These notices are available without charge from the U.S. Naval Oceanographic Office, Branch Oceanographic Offices and U.S. Collector of Customs of the major seaports in the United States and are also on file in the U.S. Consulates where they may be inspected.

§ 196.05–5 Charts.

(a) All vessels, except barges and vessels operating exclusively on rivers, shall have charts of the waters upon which they operate available for convenient reference at all times.

Subpart 196.07—Notice of Casualty and Voyage Records

AUTHORITY: The provisions of this Subpart 196.07 interpret or apply R.S. 4450, as amended, 4453, as amended, secs. 13, 17, 54 Stat. 165, 166, as amended, sec. 10, 18 Stat. 128, as amended; 46 U.S.C. 239, 435, 526*l*(c), 526p, 33 U.S.C. 361. Treasury Dept. Orders 167–32, Sept. 23, 1958, 23 F.R. 7605; 167–38, Oct. 26, 1959, 24 F.R. 8857.

§ 196.07–1 Notice of casualty.

(a) The owner, agent, master, or person in charge of a vessel involved in a marine casualty shall give notice as soon as possible to the nearest marine inspection office of the U.S. Coast Guard whenever the casualty results in any of the following:

(1) Damage to property in excess of $1,500 except for scientific equipment.

(2) Material damage affecting the seaworthiness or efficiency of a vessel.

(3) Stranding or grounding.

(4) Loss of life.

(5) Injury causing any person to remain incapacitated for a period in excess of 72 hours; except injuries to harbor workers not resulting in death and not resulting from vessel casualty or vessel equipment casualty.

(b) The master of any nuclear vessel shall immediately inform the Commandant in the event of any accident or casualty to the nuclear vessel which may lead to an environmental hazard. The master shall also immediately inform the competent governmental authority of the country in whose waters the vessel may be in, or whose waters the vessel approaches in a damaged condition.

§ 196.07–5 Information required.

(a) The notice required by § 196.07–1 shall show the name and official number of the vessel involved, the owner or agent thereof, the nature and probable occasion of the casualty, the locality in which it occurred, the nature and extent of injury to persons and the damage to property.

§ 196.07–10 Written report.

(a) In addition to the notice required by § 196.07–1 the person in charge of the vessel shall, as soon as possible, report in writing and in person to the Officer in Charge, Marine Inspection, at the port in which the casualty occurred or nearest the port of first arrival. However, if due to the distance it may be inconvenient to report in person, it may be done in writing only. The written report required for personal accident shall be made on Form CG–924E and submitted for each individual injured and each loss of life. For all other vessel casualties the written report shall be made on Form CG–2692.

(b) If filed without delay, the Form CG–924E or CG–2692 may also provide the notice required by § 196.07–1.

§ 196.07–15 Retention of records.

(a) The owner, agent, master, or other person in charge of any vessel involved in a marine casualty shall retain such voyage records of the vessel as are maintained by the vessel, such as both rough and smooth deck and engineroom logs, bell books, navigation charts, navigation work books, compass deviation cards, gyrocompass records, storage plans, record of draft, aids to mariners, radiograms sent and received, the radio log, and crew and passenger lists. The owner, agent, master, or other officer in charge, shall make these records available to a duly authorized Coast Guard officer or employee for examination upon request.

§ 196.07–20 Aids to Navigation.

(a) Whenever a vessel collides with a lightship, buoy, or other aid to navigation under the jurisdiction of the Coast Guard, or is connected with any such collision, it shall be the duty of the person in charge of such vessel to report the accident to the nearest Officer in Charge, Marine Inspection. No report on Form CG–2692 is required unless any of the results listed in § 196.07–1(a) occur.

§ 196.07–25 Reports when state of war exists.

(a) During the period when a state of war exists between the United States and any foreign nation, communications in regard to casualties or accidents shall be handled with caution and the reports shall not be made by radio or by telegram.

Subpart 196.13—Station Bills

AUTHORITY: The provisions of this Subpart 196.13 interpret or apply R.S. 4488, as amended; 46 U.S.C. 481. Treasury Dept. Order 167–38, Oct. 26, 1959, 24 F.R. 8857.

§ 196.13–1 Application.

(a) The provisions of this subpart shall apply to all manned vessels.

§ 196.13–5 Master's responsibility.

(a) A station bill (muster list) shall be prepared by the master of the vessel who shall be responsible to sign such station bill and to ascertain that it is duly posted in conspicuous locations in the vessel, particularly in the quarters of crewmembers and scientific personnel, before the vessel sails.

§ 196.13–10 Duties of crew and scientific personnel.

(a) The station bill shall set forth the special duties and duty station of each member of the crew and scientific personnel for the various emergencies. The duties shall, as far as possible, be comparable with the regular work of the individual. The duties shall in general include the following, and in addition such other duties shall be assigned as are necessary in the case of the particular vessel for the proper handling of the particular emergency:

(1) The closing of airports, watertight doors, scuppers, sanitary, and other discharges which lead through the vessel's hull below the margin line, etc., the stopping of fans and ventilating systems, and the operation of all safety equipment.

(2) The preparation and launching of lifeboats and liferafts.

(3) The extinction of fire.

(4) The custody of the portable radio apparatus required by Subpart 192.55 of this subchapter.

§ 196.13–15 Emergency signals.

(a) *General.* The station bill shall set forth the various signals to be used for the calling of the crew to their stations and for giving instructions while at their stations. These signals shall be as set forth in this section.

(b) *Fire alarm stations.* (1) The fire alarm signal shall be a continuous blast of the whistle for a period of not less than 10 seconds supplemented by the continuous ringing of the general alarm bells for not less than 10 seconds.

(2) For dismissal from fire alarm stations, the general alarm shall be sounded three times supplemented by three short blasts of the whistle.

(c) *Boat stations or boat drills.* (1) The signal for boat stations or boat drill shall be a succession of more than six short blasts followed by one long blast of the whistle supplemented by a comparable signal on the general alarm bells.

(2) Where whistle signals are used for handling the lifeboats, they shall be as follows:

(i) To lower lifeboats, one short blast.

(ii) To stop lowering the lifeboats, two short blasts.

(3) For dismissal from boat stations, there shall be three short blasts of the whistle.

(d) The master of any vessel may establish such other emergency signals, in addition to the above, as will provide that all officers, crew, and passengers will have positive and certain notice of the existing emergency.

§ 196.13–20 Master to instruct crew and scientific personnel.

(a) The master shall conduct such drill and give such instructions as are necessary to insure that all hands are familiar with their duties as specified in the station bill.

Subpart 196.14—Manning of Lifeboats and Liferafts

AUTHORITY: The provisions of this Subpart 196.14 interpret or apply R.S. 4488, as amended; 46 U.S.C. 481, Treasury Dept. Order 167–38, Oct. 18, 1950, 24 F.R. 8857.

§ 196.14–1 Application.

(a) The provisions of this subpart shall apply to all vessels equipped with lifeboats and/or liferafts.

§ 196.14–5 Person in command of lifeboat or liferaft.

(a) For vessels in ocean service, a licensed deck officer, an able seaman, or a certificated lifeboatman shall be placed in charge of each lifeboat or liferaft. When two or more certificated lifeboatmen are required by Table 196.14–10(a) a second in command shall also be appointed, which person shall be either a licensed deck officer, an able seaman or a certificated lifeboatman.

(b) For vessels in services other than ocean service, the master shall appoint a person in command of each lifeboat and each liferaft. Except for vessels in river service, this person in command shall be either a licensed deck officer, an able seaman, or a certificated lifeboatman.

(c) The person in charge of each lifeboat or liferaft shall have a list of its crew, and shall see that the persons under his orders are acquainted with their several duties.

§ 196.14–10 Certificated lifeboatmen.

(a) Except for vessels in river service, there shall be for each lifeboat and each liferaft a number of certificated lifeboatmen equal to that specified in Table 196.14–10(a): *Provided*, That vessels required to carry sufficient lifeboats on each side to accommodate all persons on board need only carry the certificated lifeboatmen required for the manning of the lifeboats on one side.

TABLE 196.14–10(a)

Prescribed complement of lifeboat or liferaft		Minimum number of lifeboatmen	
Over	Not over	Ocean service	All services other than ocean [1]
	25	1	1
25	40	2	2
40	60	3	3
60	85	4	4
85	110	5	5
110		6	6

[1] Certificated lifeboatmen are not required on vessels in river service.

(b) The allocation of the certificated lifeboatmen to each lifeboat and each liferaft shall be at the discretion of the master according to the circumstances.

§ 196.14–15 Motor-propelled lifeboat.

(a) The master shall assign to each motor-propelled lifeboat a man capable of working the motor.

§ 196.14–20 Lifeboat carrying a radiotelegraph and/or searchlight.

(a) The master shall assign to each lifeboat carrying a radiotelegraph and/or searchlight a man capable of operating such equipment.

Subpart 196.15—Test, Drills, and Inspections

AUTHORITY: The provisions of this Subpart 196.15 interpret or apply R.S. 4488, as amended; 46 U.S.C. 481, Treasury Dept. Order 167–38, Oct. 26, 1950, 24 F.R. 8857.

§ 196.15–1 Application.

(a) The provisions of this subpart shall apply to all vessels.

§ 196.15–3 Steering gear, whistle, and means of communication.

(a) On all vessels making a voyage of more than 48 hours duration, the entire steering gear, the whistle, and the means of communication between the bridge or pilothouse and engineroom shall be examined and tested by an officer of the vessel within a period of not more than 12 hours prior to departure. On all other vessels similar examinations and tests shall be made at least once in every week.

(b) The date of the test and the condition of the equipment shall be noted in the official logbook.

§ 196.15–5 Drafts.

(a) The master of every vessel on an ocean, coastwise, or Great Lakes voyage shall enter the drafts of the vessel, forward and aft, in the official logbook when leaving port.

(b) On vessels subject to the requirements of Subchapter E (Load Lines) of this chapter at the time of departure from port on an ocean, coastwise, or Great Lakes voyage, the master shall insert in the official logbook a statement of the position of the loadline mark, port, and starboard, in relation to the surface of the water in which the vessel is then floating.

(1) When an allowance for draft is made for density of the water in which the vessel is floating, this density is to be noted in the official logbook.

§ 196.15–10 Sanitation.

(a) It shall be the duty of the master and chief engineer to see that the vessel, and, in particular, the quarters are in a clean and sanitary condition. The chief engineer shall be responsible only for the sanitary condition of the engineering department.

§ 196.15–15 Examination of boilers and machinery.

(a) It shall be the duty of the chief engineer when he assumes charge of the boilers and machinery of a vessel to examine them thoroughly. If any parts thereof are in unsatisfactory condition, or if the safety-valve seals are broken, the fact shall immediately be reported to the master, owner, or agent, and the Officer in Charge, Marine Inspection.

§ 196.15–20 Hatches and other openings.

(a) It shall be the responsibility of the master to assure himself that all exposed hatches and other openings in the hull of his vessel are closed, made properly watertight by the use of tarpaulins, gaskets or similar devices, and in all respects properly secured for sea before leaving protected waters.

(b) The openings to which this section applies are as follows:

(1) Exposed hatches.

(2) Gangway and other ports fitted below the freeboard deck.

(3) Port lights that are not accessible during navigation, including the dead lights for such port lights.

(c) The master at his discretion may permit hatches or other openings to remain uncovered or open, or to be uncovered or opened for reasonable purposes such as ship's maintenance while the vessel is being navigated: *Provided*, That in his opinion existing conditions warrant such action.

(d) In the event the master employs the discretionary provisions of this section after leaving port he shall cause appropriate entries to be made in the official log or equivalent thereof setting forth the time of uncovering, opening, closing or covering of the hatches or

other openings to which this section applies and the circumstances warranting the action taken.

(e) The discretionary provisions of this section shall not relieve the master of his responsibility for the safety of his vessel, her crew or cargo.

§ 196.15–25 Line-throwing appliances.

(a) On vessels fitted with a line-throwing appliance, it shall be the duty of the master to drill his crew in the use of such appliance, and require it to be fired at least once in every 3 months. Each drill shall be recorded in the vessel's official logbook. The service line shall not be used for drill purpose. The drill shall be conducted as follows:

(1) For impulse-projected rocket type, by actually firing the rocket with any flexible line of proper size and length, suitably faked or laid out.

(2) For shoulder gun type, by actually firing, using the regular cartridge and projectile with any flexible line of proper size and length, suitably faked or laid out.

(3) For Lyle gun type, by actually firing, using 2½ ounces of powder, the regular service projectile with any flexible line of proper size and length suitably faked or laid out.

§ 196.15–30 Emergency lighting and power systems.

(a) Where fitted, it shall be the duty of the master to see that the emergency lighting and power systems are operated and inspected at least once in each week that the vessel is navigated to be assured that the system is in proper operating condition.

(b) Internal combustion engine driven emergency generators shall be operated under load for at least 2 hours, at least once in each month that the vessel is navigated.

(c) Storage batteries for emergency lighting and power systems shall be tested at least once in each 6-month period that the vessel is navigated to demonstrate the ability of the storage battery to supply the emergency loads for the specified period of time.

(d) The date of the tests and the condition and performance of the apparatus shall be noted in the official logbook.

§ 196.15–35 Fire and boat drills.

(a) The master shall be responsible for conducting a fire and boat drill at least once in every week. The scheduling of such drills shall be at the discretion of the master except that at least one fire and boat drill shall be held within 24 hours of leaving a port if more than 25 percent of the crew have been replaced at that port.

(b) The fire and boat drill shall be conducted as if an actual emergency existed. All hands should report to their respective stations and be prepared to perform the duties specified in the station bill.

(1) Fire pumps shall be started and a sufficient number of outlets used to ascertain that the system is in proper working order.

(2) All rescue and safety equipment shall be brought from the emergency equipment lockers and the persons designated shall demonstrate their ability to use the equipment.

(3) All watertight doors which are in use while the vessel is underway shall be operated.

(4) Weather permitting, lifeboat covers and strongbacks shall be removed, plugs or caps put in place, boat ladders secured in position, painters led forward and tended, and other lifesaving equipment prepared for use. The motor and hand-propelling gear of each lifeboat, where fitted, shall be operated for at least 5 minutes.

(5) In port, every lifeboat shall be swung out, if practicable, and the unobstructed lifeboats shall be lowered to the water and the crew exercised in the use of the oars and other means of propulsion if provided for the lifeboat. Although all lifeboats may not be used in a particular drill, care shall be taken that all lifeboats are given occasional use to ascertain that all lowering equipment is in proper order and the crew properly trained. The master shall be responsible that each lifeboat is lowered to the water at least once in each 3 months.

(6) When the vessel is underway, and weather permitting, all lifeboats shall be swung out to ascertain that the gear is in proper order.

(7) The person in charge of each lifeboat and liferaft shall have a list of its crew and shall see that the men under his command are acquainted with their duties.

(8) Lifeboat equipment shall be examined at least once a month to insure that it is complete.

(c) An entry shall be made in the vessel's official logbook relative to each fire and boat drill setting forth the date and hour, length of time of the drill, numbers on the lifeboats swung out and numbers on those lowered, the length of time that motor and hand-propelled lifeboats are operated, the number of lengths of hose used, together with a statement as to the condition of all fire and lifesaving equipment, watertight door mechanisms, valves, etc. An entry shall also be made to report the monthly examination of the lifeboat equipment. If in any week the required fire and boat drills are not held or only partial drills are held, an entry shall be made stating the circumstances and extent of the drills held.

(d) A copy of these requirements, Form CG–809, Notice-Station Bill and Drills, shall be framed under glass or other transparent material and posted in a conspicuous place about the vessel. This form may be obtained from the Officer in Charge, Marine Inspection.

§ 196.15–40 Electric power-operated lifeboat winches.

(a) It shall be the duty of the master to see that all lifeboat winch control apparatus, including motor controllers, emergency switches, master switches, are examined at least once in each 3 months. The examination shall include the removal of drain plugs and/or the opening of drain valves in such appliances to assure that the enclosures are free of water.

(b) The date of the examination required by this section and the condition of the equipment shall be noted in the official logbook.

§ 196.15–45 Lifeboats, rescue boats, liferafts, lifefloats, and buoyant apparatus.

(a) (1) It shall be the duty of the master or person in charge to see that the lifeboats, rescue boats, liferafts, lifefloats, and buoyant apparatus are properly maintained at all times, and that all equipment for his vessel required by the regulations in this subchapter is provided, maintained, and replaced as indicated.

(2) The master shall assign to one or more officers the duty of seeing that the lifeboats, rescue boats, liferafts, lifefloats, and buoyant apparatus are at all times ready for immediate use.

(3) The decks on which lifeboats, rescue boats, liferafts, lifefloats, and buoyant apparatus are stowed shall be kept clear of cargo or any other obstructions which would interfere with the immediate launching of such equipment.

(b) Where motor-propelled lifeboats are carried, the motor of each lifeboat shall be operated in the ahead and astern position for a period of not less than 5 minutes at least once in each week.

(c) All lifeboats, rescue boats and rigid type liferafts shall be stripped, cleaned, and thoroughly overhauled at least once in every year. When lifeboats are removed from a vessel for this purpose on a rotational basis, the installation test prescribed by Subpart 192.35 of this subchapter need not be made.

(d) The fuel tanks of all motor-propelled lifeboats shall be emptied and the fuel changed at least once in every year.

(e) Vessels in ocean or coastwise service having a sufficient number of lifeboats on each side to accommodate all persons on board may care for their lifeboats at sea: *Provided*, That a number of lifeboats sufficient to accommodate all persons on board are fully equipped and ready for use at all times.

(f) Inflatable liferafts shall be serviced at an approved service facility every 12 months or not later than next inspection for certification provided the time since date of last servicing does not exceed 15 months. Except in emergencies no servicing should be done aboard vessels.

§ 196.15–50 Radio apparatus for lifeboats.

(a) It shall be the duty of the master to require that all batteries for all fixed and portable radio apparatus for lifeboats are brought up to full charge weekly if the batteries are of a type which require recharging.

(b) The transmitter shall be tested weekly using a suitable artificial aerial.

§ 196.15–55 Requirements for fuel oil.

(a) It shall be the duty of the chief engineer to cause an entry in the log to

be made of each supply of fuel oil received on board, stating the quantity received, the name of the vendor, the name of the oil producer, and the flashpoint (closed cup test) for which it is certified by the producer.

(b) It shall be the further duty of the chief engineer to cause to be drawn and sealed and suitably labeled at the time the supply is received on board, a half-pint sample of each lot of fuel oil. These samples shall be preserved until the particular supply of oil is exhausted.

§ 196.15–60 Firefighting equipment, general.

(a) It shall be the duty of the owner, master, or person in charge to see that the vessel's firefighting equipment is at all times ready for use and that all such equipment required by the regulations in this subchapter is provided, maintained, and replaced as indicated.

(b) It shall be the duty of the owner, master, or person in charge to require and have performed at least once in every 12 months the tests and inspections of all hand portable fire extinguishers, semiportable fire extinguishing systems, and fixed fire extinguishing systems on board as described in Tables 189.25–20(a)(1) and 189.25–20(a)(2) in § 189.25–20(a) of this subchapter. The owner, master, or person in charge shall keep records of such tests and inspections showing the dates when performed, the number and/or other identification of each unit tested and inspected, and the name(s) of the person(s) and/or company conducting the tests and inspections. Such records shall be made available to the marine inspector upon request and shall be kept for the period of validity of the vessel's current certificate of inspection. Where practicable these records should be kept in or with the vessel's logbook. The conduct of these tests and inspections does not relieve the owner, master, or person in charge of his responsibility to maintain this firefighting equipment in proper condition at all times.

Subpart 196.17—Steering Orders

§ 196.17–1 Method of communicating.

(a) All steering orders shall be given and communicated in terms of "right rudder" where it is intended that the top of the wheel, the rudder blade, and the head of the ship should go to the right, and "left rudder" where it is intended that the top of the wheel, the rudder blade, and the head of the ship should go to the left.

Subpart 196.20—Whistling

§ 196.20–1 Unnecessary whistling prohibited.

(a) The unnecessary sounding of the vessel's whistle is prohibited within any harbor limits of the United States.

Subpart 196.23—Unauthorized Lights

§ 196.23–1 Unauthorized lights prohibited.

(a) The master shall not authorize or permit the carrying of any lights not required by law that in any way will interfere with the distinguishing of the signal lights.

Subpart 196.25—Searchlights

§ 196.25–1 Improper use prohibited.

(a) No person shall flash or cause to be flashed the rays of a searchlight or other blinding light onto the bridge or into the pilothouse of any vessel underway.

Subpart 196.27—Lookouts

§ 196.27–1 Master's and officer's responsibility.

(a) Nothing in this part shall exonerate any master or officer in command from the consequences of any neglect to keep a proper lookout or the neglect of any precaution which may be required by the ordinary practice of seamen or by the special circumstances of the case.

§ 196.27–10 Reckless or negligent operation prohibited by law.

(a) Subsection 13(a) of the act of April 25, 1940 (46 U.S.C. 526*l*), reads as follows:

No person shall operate any motorboat or any vessel in a reckless or negligent manner so as to endanger the life, limb, or property of any person. To "operate" means to navigate or otherwise use a motorboat or a vessel.

Subpart 196.30—Reports of Accidents, Repairs, and Unsafe Equipment

AUTHORITY: The provisions of this Subpart 196.30 interpret or apply R.S. 4450, as amended, 4453, as amended, sec. 10, 18 Stat. 128, as amended; 46 U.S.C. 239, 435, 33 U.S.C. 361.

§ 196.30–1 Repairs to boilers and pressure vessels.

(a) Before making any repairs to boilers or unfired pressure vessels, the chief engineer shall submit a report covering the nature of the repairs to the Officer in Charge, Marine Inspection, at or nearest to the U.S. port where the repairs are to be made.

§ 196.30–5 Accidents to machinery.

(a) In the event of an accident to a boiler, unfired pressure vessel, or machinery tending to render the further use of the item unsafe until repairs are made, or if by ordinary wear such items become unsafe, a report shall be made by the Chief Engineer immediately to the Officer in Charge, Marine Inspection, or if at sea, immediately upon arrival at port.

§ 196.30–10 Notice required before repair.

(a) No repairs or alterations, except in an emergency, shall be made to any lifesaving or fire detecting or extinguishing equipment without advance notice to the Officer in Charge, Marine Inspection. When emergency repairs or alterations have been made, notice shall be given to the Officer in Charge, Marine Inspection, as soon as practicable.

§ 196.30–20 Breaking of safety valve seal.

(a) If at any time it is necessary to break the seal on a safety valve for any purpose, the Chief Engineer shall advise the Officer in Charge, Marine Inspection, at the next port of call, giving the reason for breaking the seal and requesting that the valve be examined and adjusted by an inspector. (R.S. 4419, as amended; 46 U.S.C. 393.)

Subpart 196.33—Cable Traveler

AUTHORITY: The provisions of this Subpart 196.33 interpret or apply R.S. 4488, as amended; 46 U.S.C. 481. Treasury Dept. Order 167–38, Oct. 26, 1959, 24 F.R. 8857.

§ 196.33–1 When required.

(a) On vessels where the distance between deckhouses is more than 150 feet, a wire cable shall be stretched between the deckhouses at all times when the vessel is navigating in other than protected waters. As many loose rings with lanyards shall be attached as deemed necessary by the master. In any case, a properly constructed raised catwalk or raised bridge or a below deck passage may be substituted for the required cable.

Subpart 196.34—Work Vests

AUTHORITY: The provisions of this Subpart 196.34 interpret or apply R.S. 4488, as amended, 4491, as amended; 46 U.S.C. 481, 489. Treasury Dept. Order 167–38, Oct. 26, 1959, 24 F.R. 8857.

§ 196.34–1 Application.

(a) Provisions of this subpart shall apply to all vessels.

§ 196.34–5 Approved unicellular plastic foam work vests.

(a) Buoyant work vests carried under the permissive authority of this subpart shall conform to the specifications contained in Subpart 160.053 in Subchapter Q (Specifications) of this chapter.

§ 196.34–10 Use.

(a) Approved buoyant work vests are considered to be items of safety apparel and may be carried aboard vessels to be worn by crew members when working near or over the water under favorable working conditions. They shall be used under the supervision and control of designated ship's officers. When carried, such vests shall not be accepted in lieu of any portion of the required number of approved life preservers and shall not be substituted for the approved life preservers required to be worn during drills and emergencies.

§ 196.34–15 Shipboard stowage.

(a) The approved buoyant work vests shall be stowed separately from the regular stowage of approved life preservers.

(b) The locations for the stowage of work vests shall be such as not to be easily confused with that for approved life preservers.

§ 196.34–20 Shipboard inspections.

(a) Each work vest shall be subject to examination by a marine inspector to determine its serviceability. If found to

be satisfactory, it may be continued in service, but shall not be stamped by a marine inspector with a Coast Guard stamp. If a work vest is found not to be in a serviceable condition, then such work vest shall be removed from the vessel. If a work vest is beyond repair, it shall be destroyed or mutilated in the presence of a marine inspector so as to prevent its continued use as a work vest.

Subpart 196.35—Logbook Entries

AUTHORITY: The provisions of this Subpart 196.35 interpret or apply R.S. 4472, as amended, 4488, as amended, sec. 6, 45 Stat. 1494, sec. 6, 49 Stat. 889; 46 U.S.C. 170, 481, 85e, 88e. Treasury Dept. Orders 167-38, Oct. 26, 1959, 24 F.R. 8857; 167-48, Oct. 19, 1962; 27 F.R. 10504.

§ 196.35-1 Application.

(a) Except as specifically noted, the provisions of this subpart shall apply to all manned vessels.

§ 196.35-3 Logbooks and records.

(a) Under various statutes or by regulations in this subchapter, all vessels with the exception of vessels operated exclusively on rivers of the United States are required to have certain logbooks or records, and, when the occasion arises, it is the duty of the master or person in charge to place therein specific entries as required by law or regulations in this chapter.

(b) R.S. 4290, as amended (46 U.S.C. 201), states: "Every vessel making voyages from a port in the United States to any foreign port, or, being of the burden of 75 tons or upward, from a port on the Atlantic to a port on the Pacific, or vice versa, shall have an Official Logbook; * * *." This official logbook is furnished gratuitously to masters of U.S.-flag vessels by the Coast Guard, as Form CG-706B or CG-706C, depending upon the number of persons employed as crew. There is printed in the first several pages of this official logbook various acts of Congress relating to logbooks and the entries required to be made therein. When a voyage is completed, or after a specified period of time is completed, the official logbooks with required entries therein shall be filed with the Officer in Charge, Marine Inspection, at or nearest the U.S. port where the vessel may be.

(c) For vessels other than those required to have official logbooks by R.S. 4290 (46 U.S.C. 201), the owners, operators, and/or masters are to supply their own logs or records in any form desired, which will be considered to take the place of the official logbooks and may be used for the purpose of making entries therein as required by law or regulations in this subchapter. Such logs or records are not filed with the Officer in Charge, Marine Inspection, but shall be kept available for review by a marine inspector for a period of 1 year after the date to which the records refer, except for separate records of tests and inspections of firefighting equipment which shall be maintained with the vessel's logs for the period of validity of the vessel's certificate of inspection.

§ 196.35-5 Actions required to be logged.

(a) The actions and observations noted in this section shall be entered in the official logbook. This section contains no requirements which are not made in other portions of this subchapter, the items being merely grouped together for convenience.

(1) Fire and boat drills. Weekly. See § 196.15-35.

(2) Steering gear, whistle, and means of communication. Prior to departure. See § 196.15-3.

(3) Drafts and load line marks. Prior to leaving port, ocean, coastwise, and Great Lakes service only. See § 196.15-5.

(4) Line-throwing appliances. Once every 3 months. See § 196.15-25.

(5) Emergency lighting and power systems. Weekly and semiannually. See § 196.15-30.

(6) Electric power-operated lifeboat winches. Once every 3 months. See § 196.15-40.

(7) Fuel oil data: Upon receipt of fuel oil on board. See § 196.15-55.

(8) Hatches and other openings. All openings and closings required by § 196.15-20.

(9) Magazines and magazine chests. Maximum and minimum temperatures as required by § 196.85-1(b).

§ 196.35-10 Official log entries.

(a) On vessels where an official logbook is required by R.S. 4290 (46 U.S.C. 201), all items relative to the crew as well as with respect to any casualties which may occur, shall be entered in the official logbook as required by this law.

Subpart 196.36—Display of Plans

§ 196.36-1 When required.

(a) All manned vessels shall have permanently exhibited for the guidance of the officer in charge of the vessel, general arrangement plans showing for each deck the various fire retardant bulkheads together with particulars of the fire-detecting, manual alarm and fire extinguishing systems, fire doors, means of ingress to the different compartments, the ventilating systems including the positions of the dampers, the location of the remote means of stopping the fans, and the identification of the fans serving each section.

(R.S. 4488, as amended; 46 U.S.C. 481. Treasury Dept. Order 167-38, Oct. 26, 1959, 24 F.R. 8857)

Subpart 196.37—Markings for Fire and Emergency Equipment, etc.

AUTHORITY: The provisions of this Subpart 196.37 interpret or apply R.S. 4488, as amended; 46 U.S.C. 481. Treasury Dept. Order 167-38, Oct. 26, 1959, 24 F.R. 8857.

§ 196.37-1 Application.

(a) The provisions of this subpart shall apply to all vessels.

§ 196.37-3 General.

(a) It is the intent of this subpart to provide such markings as are necessary for the guidance of the persons on board in case of an emergency. In any specific case, and particularly on small vessels, where it can be shown to the satisfaction of the Officer in Charge, Marine Inspection, that the prescribed markings are unnecessary for the guidance of the persons on board in case of emergency, such markings may be modified or omitted.

(b) In addition to English, notices, directional signs, etc., shall be printed in languages appropriate to the service of the vessel.

(c) Where in this subpart red letters are specified, letters of a contrasting color on a red background will be accepted.

§ 196.37-5 General alarm bell switch.

(a) The general alarm bell switch in the pilothouse shall be clearly and permanently identified by lettering on a metal plate or with a sign in red letters on a suitable background: "GENERAL ALARM."

CROSS REFERENCE: See also § 113.25-20 of Subchapter J (Electrical Engineering) of this chapter.

§ 196.37-7 General alarm bells.

(a) All general alarm bells shall be identified by red lettering at least ½ inch high: "GENERAL ALARM—WHEN BELL RINGS GO TO YOUR STATION."

§ 196.37-9 Carbon dioxide alarm.

(a) All carbon dioxide alarms shall be conspicuously identified: "WHEN ALARM SOUNDS—VACATE AT ONCE. CARBON DIOXIDE BEING RELEASED."

§ 196.37-10 Fire extinguishing system branch lines.

(a) The branch line valves of all fire extinguishing systems shall be plainly and permanently marked indicating the spaces served.

§ 196.37-13 Fire extinguishing system controls.

(a) The control cabinets or spaces containing valves or manifolds for the various fire extinguishing systems shall be distinctly marked in conspicuous red letters at least 2 inches high: "CARBON DIOXIDE FIRE APPARATUS," or "FOAM FIRE APPARATUS," etc., as the case may be.

§ 196.37-15 Firehose stations.

(a) Each fire hydrant shall be identified in red letters and figures at least 2 inches high "FIRE STATION NO. 1", "2", "3", etc. Where the hose is not stowed in the open or behind glass so as to be readily seen, this identification shall be so placed as to be readily seen from a distance.

§ 196.37-20 Self-contained breathing apparatus and gas masks.

(a) Lockers or spaces containing self-contained breathing apparatus shall be marked "SELF-CONTAINED BREATHING APPARATUS".

§ 196.37-23 Hand portable fire extinguishers.

(a) Each hand portable fire extinguisher shall be marked with a number

and the location where stowed shall be marked with a corresponding number at least ½ inch high. Where only one type and size of hand portable fire extinguisher is carried, the numbering may be omitted.

§ 196.37–25 Emergency lights.

(a) All emergency lights shall be marked with a letter "E" at least ½ inch high.

§ 196.37–33 Instructions for changing steering gear.

(a) Instructions in at least ½ inch letters and figures shall be posted in the steering engineroom, relating in order, the different steps to be taken in changing to the emergency steering gear. Each clutch, gear, wheel, lever, valve, or switch which is used during the changeover shall be numbered or lettered on a metal plate or painted so that the markings can be recognized at a reasonable distance. The instructions shall indicate each clutch or pin to be "in" or "out" and each valve or switch which is to be "opened" or "closed" in shifting to any means of steering for which the vessel is equipped. Instructions shall be included to line up all steering wheels and rudder amidship before changing gears.

§ 196.37–35 Rudder orders.

(a) At all steering stations, there shall be installed a suitable notice on the wheel or device or in such other position as to be directly in the helmsman's line of vision, to indicate the direction in which the wheel or device must be turned for "right rudder" and for "left rudder".

§ 196.37–37 Lifeboats.

(a) The name of the vessel shall be plainly marked or painted on each side of the bow of each lifeboat in letters not less than 3 inches high. For vessels on an international voyage, the vessel's port of registry shall be added in similar type letters.

(b) The number of each lifeboat shall be plainly marked or painted on each side of the bow of each lifeboat in figures not less than 3 inches high. The lifeboats on each side of the vessel shall be numbered from forward aft, with the odd numbers on the starboard side.

(c) The cubical contents and number of persons allowed to be carried in each lifeboat shall be plainly marked or painted on each side of the bow of each lifeboat in letters and numbers not less than 1½ inches high. In addition, the number of persons allowed shall be plainly marked or painted on top of at least two thwarts in letters and numbers not less than 3 inches high.

(d) All oars shall be conspicuously marked with the vessel's name.

(e) Where mechanical disengaging apparatus is used, the control effecting the release of the lifeboat shall be painted bright red and shall have thereon in raised letters either the words—"DANGER—LEVER DROPS BOAT" or the words—"DANGER—LEVER RELEASES HOOKS".

(f) The top of thwarts, side benches, and footings of lifeboats shall be painted or otherwise colored international orange. The area in way of the red mechanical disengaging gear control lever, from the keel to the side bench, shall be painted or otherwise colored white, to provide a contrasting background for the lever.. This band of white should be approximately 12 inches wide depending on the internal arrangement of the lifeboat.

§ 196.37–40 Liferafts, lifefloats, and buoyant apparatus.

(a) Rigid type liferafts, lifefloats, and buoyant apparatus, together with their oars and paddles, shall be conspicuously marked with the vessel's name. For vessels on an international voyage, the vessel's port of registry also shall be similarly marked on lifefloats and bouyant apparatus.

(b) The number of persons allowed on each rigid type liferaft, lifefloat, and buoyant apparatus shall be conspicuously marked or painted thereon in letters and numbers at least 1½ inches high.

(c) There shall be stenciled in a conspicious place in the immediate vicinity of each inflatable liferaft the following:

INFLATABLE LIFERAFT NO. ------
------ PERSONS CAPACITY

These markings shall not be placed on the inflatable liferaft containers.

§ 196.37–43 Life preservers and ring life buoys.

(a) All life preservers, wood floats, and ring life buoys shall be marked with the vessel's name.

(b) For vessels on an international voyage, the vessel's port of registry shall be added in similar type letters on all ring life buoys.

§ 196.37–45 Firehose and axes.

(a) All firehose and axes shall be marked with the vessel's name.

§ 196.37–47 Portable magazine chests.

(a) Portable magazine chests shall be marked in letters at least 3 inches high: "PORTABLE MAGAZINE CHEST—FLAMMABLE—KEEP LIGHTS AND FIRE AWAY".

Subpart 196.39—Posting Placards of Instructions for Launching and Inflating Inflatable Liferafts

§ 196.39–1 When required.

(a) Every vessel equipped with inflatable liferafts shall have posted in conspicuous places which are regularly accessible to the crew and/or scientific personnel, approved placards containing instructions for launching and inflating inflatable liferafts for the information of persons on board. The number and location of such placards shall be as determined necessary by the Officer in Charge, Marine Inspection.

(b) Under the requirements contained in § 160.051–6(c)(1) of Subpart 160.051 in Subchapter Q (Specifications) of this chapter, the manufacturer of approved inflatable liferafts is required to provide approved placards containing such instructions with each liferaft.

Subpart 196.40—Markings on Vessels

§ 196.40–1 Application.

(a) The provisions of this subpart shall apply to all vessels except as specifically noted.

§ 196.40–5 Markings required by Customs Regulations.

(a) The following markings are required. Details of the application of the requirements as well as details of the required markings will be found in the Customs Regulations:

(1) *Name of vessel.* On both bows and the stern, and on steam vessels the name is also required on both sides of the pilothouse.

(2) *Hailing Port.* On the stern.

(3) *Official Number.* On the vessel's main beam.

(4) *Net tonnage.* On the vessel's main beam.

§ 196.40–10 Draft marks.

(a) All vessels 50 gross tons and over shall have the draft of the vessel plainly and legibly marked upon the stem and upon the sternpost or rudderpost or at any place at the stern of the vessel as may be necessary for easy observance. The draft shall be taken from the bottom of the keel at the marks to the surface of the water, the bottom of the mark to indicate the draft in feet.

(b) In cases where the keel does not extend forward or aft to the location of the draft marks, due to raked stem, or cutaway skeg, the datum line from which the draft shall be taken shall be obtained by projecting the line of the bottom of keel forward, or aft, as the case may be, to the location of the draft marks.

(c) In cases where a vessel may have a skeg or other appendage extending locally below the line of the keel, the draft at the end of the vessels adjacent to such appendage shall be measured to a line tangent to the lowest part of such appendage and parallel to the line of the bottom of the keel.

§ 196.40–15 Load line marks.

(a) Vessels assigned a load line shall have the deck line and the load line marks permanently marked or embossed as required by Subchapter E (Load Lines) of this chapter.

Subpart 196.43—Placard of Life-saving Signals and Breeches Buoy Instructions

§ 196.43–1 Application.

(a) The provisions of this subpart shall apply to all manned vessels certificated for ocean, coastwise, or Great Lakes service.

§ 196.43–5 Availability.

(a) On all vessels to which this subpart applies there shall be posted in the pilothouse and readily available to the deck officer of the watch a placard (Form CG–811) containing instructions

for the use of breeches buoys and the lifesaving signals as set forth in Regulation 16, Chapter V, of the International Convention for Safety of Life at Sea, 1960. These signals shall be used by vessels or persons in distress when communicating with lifesaving stations and maritime rescue units.

(b) A copy of Form CG–811 shall also be conveniently posted in the engineroom and crews quarters of all vessels to which this subpart applies.

Subpart 196.45—Carrying of Excess Steam

§ 196.45–1 Master and chief engineer responsible.

(a) It shall be the duty of the master and the engineer in charge of the boilers of any vessel to require that a steam pressure is not carried in excess of that allowed by the certificate of inspection, and to require that the safety valves, once set and sealed by the inspector, are in no way tampered with or made inoperative except as provided in § 196.30–20.

Subpart 196.50—Compliance With Provisions of Certificate of Inspection

§ 196.50–1 Master or person in charge responsible.

(a) It shall be the duty of the master or other person in charge of the vessel to see that all of the provisions of the certificate of inspection are strictly adhered to. Nothing in this subpart shall be construed as limiting the master or other person in charge of the vessel, at his own responsibility, from diverting from the route prescribed in the certificate of inspection or taking such other steps as he deems necessary and prudent to assist vessels in distress or for other similar emergencies.

Subpart 196.53—Exhibition of License

§ 196.53–1 Licensed officers.

(a) All licensed officers on a vessel shall have their licenses conspicuously displayed as required by R.S. 4446 (46 U.S.C. 232).

Subpart 196.60—Motion Picture Film and Equipment

§ 196.60–1 Type required.

(a) Only acetate or slow-burning film may be used. Nitrocellulose film is specifically prohibited.

(b) Projectors shall be of an approved type. (R.S. 4488, as amended; 46 U.S.C. 481. Treasury Dept. Order 167–38, Oct. 26, 1959, 24 F.R. 8857.)

Subpart 196.75—Prevention of Oil Pollution

§ 196.75–1 Prohibited zones.

(a) All vessels shall be so operated as to meet the requirements of the Oil Pollution Act, 1924 (33 U.S.C. 431–437). In addition, all vessels shall be so operated as to avoid discharging any oil or oily ballast which may foul the surface of the sea, within any of the prohibited zones set forth in the Oil Pollution Act, 1961 (33 U.S.C. 1001–1015). (Sec. 8, 75 Stat. 403; 33 U.S.C. 1007; Treasury Dept. Order 167–46, Nov. 6, 1961, 26 F.R. 10609.)

Subpart 196.80—Explosive Handling Plan

§ 196.80–1 Master's responsibility.

(a) It shall be the responsibility of the master to have prepared, sign, and prominently posted in conspicious locations operating procedures, plans, and safety precautions for all operations involving the use of explosives.

(b) The operating procedures referred to in paragraph (a) of this section shall include and set forth the special duties and stations of appropriate qualified persons for various operations involving the use of explosives. Assignment of such persons shall be commensurate with their experience and training.

(c) A copy of the operating procedures, plans and safety precautions required by paragraph (a) of this section and all subsequent changes or revisions shall be forwarded to the Officer in Charge, Marine Inspection, issuing the certificate of inspection for review.

Subpart 196.85—Magazine Control

§ 196.85–1 Magazine operation and control.

(a) Keys to magazine spaces and magazine chests shall be kept in the sole control or custody of the Master or one delegated qualified person at all times. Test fittings for magazine sprinkler systems shall be kept in a locked cabinet under the custody of the Master.

(b) Whenever explosives are stored in magazines and magazine chests they shall be inspected daily. Magazine inspection results and corrective action, when taken, shall be noted in the ship's log daily. Maximum and minimum temperatures for the previous 24-hour period shall be recorded in the ship's log along with general magazine condition and corrective action taken when necessary.

(c) The magazine sprinkler controls shall be tested monthly. Test results and all corrective actions taken shall be recorded in the ship's log.

(d) The Master shall limit access to the magazines, or the contents thereof, to persons who can document 3 months on board ship training in the use of explosives. This shall not be construed as prohibiting access to the Master or others designated by the Master.

CHANGES IN OTHER REGULATIONS

10. If the concept of having separate regulations for oceanographic vessels in Subchapter U in Chapter I of Title 46, CFR, is adopted, then the various regulations describing "application of Coast Guard regulations" will be revised to reflect establishment of this new category of inspected and certificated vessels. In particular, it is proposed to amend the tables in 46 CFR 2.01–7(a), 24.05–1(a), 30.01–5(d), 70.05–1(a), 90.05–1(a), 110.–05–1(a), and 175.05–1(a) so that these tables will be identical to Table 188.05–1(a) in the above proposed regulations in 46 CFR 188.05–1(a). Any change to Table 188.05–1(a) will be incorporated into the other tables.

Dated: September 23, 1966.

[SEAL] W. J. SMITH,
Admiral, U.S. Coast Guard,
Commandant.

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